

**PLAINTIFF'S  
EXHIBIT NO. 24  
(03.07.17 HEARING)**

- Proposal for visit
- Services
- Payment

Stanley J Seavey

020332

NUMBER

DATE

GROSS

DISCOUNT

NET AMOUNT

NUMBER	DATE	GROSS	DISCOUNT	NET AMOUNT
803	09/26/12	2,268.47	0.00	2,268.47

TOTALS

Total

2,268.47

**Liguria Foods Inc.**  
1515 North 15th Street  
Humboldt, IA 50548

CHECK NUMBER

020332

VENDOR NUMBER

V10444

CHECK DATE

10/04/2012

MM/DD/YYYY

70-2277

718

THE  
SUM OF \*\*\*\*\* TWO THOUSAND TWO HUNDRED SIXTY EIGHT AND 47/100 DOLLARS

\*\*\*\*\*2,268.47

PAY  
TO THE  
ORDER OF

Stanley J Seavey  
Process Quality Consulting, LLC  
1781 Robbins Rd.  
Franklin Grove, IL 61031

FIRST AMERICAN BANK  
ELK GROVE VILLAGE, IL 60007

*John B. Seavey*

AUTHORIZED SIGNATURE

THIS DOCUMENT HAS INVISIBLE FLUORESCENT, VIEW UNDER BLACKLIGHT, MICRO-PRINT SIGNATURE LINE (MAGNIFY TO VIEW)

⑈020332⑈ ⑈07192277⑈ 07811369701⑈

*Rec'd 10/8/12*

**Stan Seavey**  
**Process Quality Consulting, LLC**  
1781 Robbins Rd.  
Franklin Grove, IL 61031

**Invoice #: 803**

**Date: September 26, 2012**

**To: Mr. Jehan Saulnier**  
**President & CEO**  
**Liguria Foods, Inc.**  
**1515 N. 15th St.**  
**Humboldt, IA 50548**

**Description of Services: Consulting services relative to Humboldt plant process review conducted September 11-14, 2012.**

Client	Date	Description	Mileage (0.555/mile)	Time	Total
Jehan Saulnier	9/11-14	Plant process review		2 and 1/2 days	\$2000.00
		hotel		3 nights	\$268.47
<b>Total Due</b>					<b>\$2268.47</b>

Please remit payment within 30 days to:  
**Stan Seavey**  
**Process Quality Consulting, LLC**  
1781 Robbins Rd.  
Franklin Grove, IL 61031

Phone: 815.288.1151  
Cell: 630.485.0291  
Email: sjseavey@grics.net

*Thank You!*



## Liguria Foods Process Review

I propose the following, reference the process audit at Liguria Foods dry sausage operation in Humboldt, Ia.

**Time:** 3 day process review, August 14-16, 2012

**Scope:** Each step of the process from raw material receiving through drying will be evaluated. The objective is to look at the process for optimization relative to product quality, consistency, drying rates, and process controls.

**Expectations:** Key personnel from Liguria operations and quality management will be available during the visit at the appropriate stages to facilitate the review. All pertinent process procedures, data, and controls will be made available for review. The review schedule may include time during evenings or nights as well to assure all critical phases of the process are seen.

I will share any observations, suggestions, concerns, or ideas that may be of use in process optimization. A written report will be submitted to Liguria Foods after my visit.

**Cost:** \$800.00 per day, plus travel expenses.

Stan Seavey  
Process Quality Consulting, LLC  
1781 Robbins Rd.  
Franklin Grove, IL 61031  
Cell: 630.485.0291

SK  
7/25/12

My preliminary notes,  
prior to visit.

Leave Tuesday return Friday  
9AM here

### Process Control/QA

- Raw material inspection / testing / age limits
- Formulation controls / documentation
  - operating procedures / sign offs on critical + impact list
  - temperature controls
  - grinder controls / plate / knife inspection
  - rework procedures / compatibility / <sup>breakdown</sup> + nests to grind out
- Stuffing - dia checks <sup>of ingredients</sup>
  - clip check - rework controls

### Processing

Fermentation - pH on each blend

Validated processes

Oven checks / internal temp mapping

Process abnormality procedures

Heat + moisture verification

HACCP CCP's?

how determined? + monitored / verified

Verification schedule

T. monitoring

Copies of my own  
notes from plant  
visit



Process -

11 hrs @ 110°

88-12 RH

Ref/dry to 150 hold for material

80-90 RH throughout cycle

2 models + 2 green rooms

Steam cabinets only

Slicing Rm only

1-2 hours drying capacity

~2 hours process

2 min 14 off

PH Target 4.6 at on all products

Car. Process - 14.6 2.5

Qin ~~with~~ Whitman - QA Mgr

from ~~process~~ <sup>measures</sup>

2- office

Process + HLC

Calvin - Smokehouse

2600<sup>th</sup> blud wt / a 4 1/2 batch / house

PH 11 hours - (should use 2 of bottled water)

COP 1 5 5.3 in 17 hours @ 110°

COP 2 135 / 15 min. ~~2.5~~

128° / 60 min.

+ 4.6 2.85

Using pH < 4.6 criteria so control over lifetime up to many products don't meet this criteria

#2 Reg Grid Run - Vision Parking  
Set 209688 T30° regular.

PKD - S-24-12

Placed area on top of blocks

Set 03 03 ~~03~~  
93 53 50 ~~03~~  
94 57 50

\* be 6 @ 60/50

Area Collection - Day/week/RT  
1/week

Verification make daily

✓ w/ pin on own balance checks

Formulation

Fit critical - ✓ bleed formulation  
procedures

Sealed container ✓ remove from  
transfer container

Network - ✓ print signs + labels

Over -

Verification of TIT in " "

Over air balance?

✓ all over pressure for cool  
down times + showers

pt - distillation?

Chem analysis -

NIR on all?

have verified against official?

Wino - <sup>in process</sup> any <sup>deep</sup> testing? (NO)

what happens in future irregularity?  
procedure, testing?

Sanitation -

- Bulk irregular keep put else  
bleeder. Spacing confirmation can  
pull into bleeder

- Mold work - spray has procedure

in mold product ~~control~~ not to bottom

Low End of 120

802 420

F80 1410

2470

2550 w/ spicent.

21516 of Low for next  
on enclosure

Remember 10 days

## RAW MATERIALS

Q Raw materials and

5-24-12

FE REG. REG. IIR / PROVISIONAL

— guarantee FE REG. OR

THEIR AGE LIMITS + MAX. NO.

very closely. 60 days

Q 1st - labeled but not needed -

Formulated overall the

Q 1st control

HIGH RANGES ON 3000 SPS

NO ABILITY TO HANDLE SPS OR

OPTIMIZE (EX 10% RANGE)

\* WHY CONTINUE TO CASE AN COMPS

IF INFO NOT UTILIZED?

\* REQUIRED RESOURCES TO OTHER

DOUGLAS

Q 2nd DOUGLAS

Q 1st

Q 1st varying pH's and are BROWN

in HOUSE (BROWN STICK ID)

Q 2nd PH TABLETS -

possible if info is given

— INVESTIGATE ADVANCEMENT

PH 1st @ higher pH

TABLETS

— LOOK @ pH CLIMAX

— stability goals

— DO YOU NEED TO SET DATA

LOW AND FINISHED pH?

Q 3rd ASKING FOR TIME VARIATION

DATA ON MASS OF PRODUCT

DEVELOP WRITTEN  
NUMBERS IRREGULARITY / FORMS  
PLAN - INCLUDE SPENDING

pay light  
CATERING (off + in-house +  
fuel -)

dry rooms

- FOR AIR FLOW
- NO. 1 ATTACK - FAS
- MOVE / RELOCATE
- CONTROLLERS - # PLAN IN LOW ROOMS
- AIRCRAFT SET POINTS MINUTEMAN
- (Who monitors on each shift?)
- PROCESS CONTROL - (Pattern description)
- \* NEED DEDICATED STAFF

Sheds  
Duke 4  
9 AS only as T-1

Sanitary

- PROOF OF CHECK @ BATTERY AREA
- " A IN FRONT OF FLOOR STRENGTH
- PAID WITH PROPERLY
- WASH ROOM (HOLE)
- BACK IN 6 BAGS ABOVE OPEN
- SEWER
- WIND AT FOOT - MAY BE
- QUEUED
- #1 USE IS NON-UNIFORMITY OF
- PRODUCT -
- GASTRIC
- Dry room variability

- My report as edited by Jehan for use during conference call to review action plans.
- Spreadsheet from Georgia on action plan

**Stan Seavey**

FRIDAY Oct 5 10-11 AM

**From:** <JSaulnier@liguriafoods.com>  
**Date:** Tuesday, October 02, 2012 6:48 AM  
**To:** <psingh@vistapackaging.com>; <sjseavey@grics.net>; <klathrop@liguriafood.com>  
**Attach:** ATT00533.ics  
**Subject:** Report Follow Up  
**Conf call info:** Jehan, Keith, Jim, Mark, Chris  
**Dial In:** 866-410-9316  
**Code:** 513-576-0082 # 6 more

11-14 % swing FZ.LN.

25-36 % range



Stan Seavey (ss)

**Summary and Recommendations from Plant Process Review**  
**Liguria Foods- September 11-14, 2012**

**Background and Scope:**

I was contacted by Mr. Jehan Saulnier, and asked to visit the facility to review the dry sausage manufacturing processes.

The primary focus of the visit was to review the process for optimization relative to product quality, consistency, drying rates, and process controls. I was accompanied on the visit by Prem Singh, of Vista, as a follow-up to his previous visit in which he concentrated on dry room operations.

**Process Review:**

The various steps in the manufacturing process were evaluated relative to direct observation of activities, records review, and applicable work instructions. Following are the comments and recommendations.

---

• **Receiving & Storage-**

- ①
- A partial pallet of Frozen Regular Pork Trimmings from IBP/Provision Packing, Est. 20968B, Code date 5-24-12, was observed in the cooler. The tops of the boxed product showed numerous areas of rancidity on the fat. This product was reviewed with QC and Operations and I advised the product should not be used as it would be a catalyst for rancidity development in the finished product. It was stated that more of the lot was on inventory in cold storage and would have to be evaluated.

Frozen pork regulars are highly susceptible to rancidity and should be used within 60 days, and even with that require very close scrutiny to assure quality product. Temperature fluctuations in storage and tempering can accelerate the rancidity development regardless of age.

- ②
- Rework- dry rework was reviewed in the cooler. Prem noticed a vat dated 8-21. It was a product WIP infrequently produced. It was recommended that a 10 day age limit be put on dry rework in cooler storage.

- Meat trimming quality- overall the meat trim quality was good. Fresh Special Lean Pork is all blended trim for the most part and while there was variability in texture and trim clarity, no over-blended, smeared product was seen.

---

• **Formulation-**

- ③
- Fat Control- Combos of fresh trimmings are cored and tested for fat content. There is some matching of high/low combos in the pre-grind step to try to utilize varying fat content trim to minimize blend variability. However, this process is limiting in effectiveness due to a number of variables, such as actual fat content of available material, limited vat dump stations on the formulation conveyor, and inability to test frozen meat.



4

A sampling of blend data showed a 7% range on emulsion fat content. This translates to increased variability in finished product drying and quality differences. The use of an Anyl-ray could be a useful tool to nondestructively analyze both fresh and frozen meat for fat and allow for more fat control in formulation. The Anyl-ray tests a 13# ground meat sample and has been used in formulation control for many years. <http://www.oystar-group.com/chub-packaging/fat-analysis-equipment.html>

5

- Blend process- The second shift formulator added the meat combinations/weights to the scale conveyor by memory because the formulation sheet is located at the blender stand. While this may be an acceptable practice due to the limited number of raw materials in the formula it is recommended that he have his own formulation sheet to document assembly of ingredients for each blend unit rather than just recording a total blend weight.

- Mix/final grind procedures- The mix process including ingredient addition, mixing, unloading, and finished grind quality was good and no deficiencies in product quality were noted. Temperature control was good. One sanitation note- ingredient bags are staged on top of the blender grate and external contamination can fall into the blender. It should be assumed that the exterior of the bags are a contamination source. Stripping the outer bag layer off prior to staging can reduce this potential.

6

- **Stuffing-**

- Prem noticed some variability in stuffing speeds, e.g., starting and stopping of stuffing, due to logs filling up the table at times. It was noted that the stuff speed and hanging speed be optimized as much as possible to avoid start-stop, which can lead to smearing.

7

- **Oven Processing-**

- Ovens- The variations in oven design are such that the processes are essentially steam driven. This coupled with the extremely dense loading patterns on the racks mean that the product is processed very wet throughout the fermentation and heat treatment. The extremely wet conditions do provide for more balance in the house as humidity tends to even out any imbalances; however, there is a price to pay on the negative side, which is increased risk of product grease-out under the casing. There was a significant amount of greasing observed, which leads to non-uniform drying and increased downgrades. Looking at this aspect only, it becomes management's call as to the trade-offs involved.

8

- Ph Control/Testing- Currently, pH samples are pulled from the front of the house and depending on the pH drop a house may be sampled once, twice, or less likely, three times during fermentation. With at least four blends per house, not all blends are verified for pH meeting the critical limit. Since the blend is

the lowest denominator for control, each blend should be tested. When the houses are loaded, a "blend stick" could be placed at the front of the house with pieces representing all blends in that oven. This way, each blend is accessible for testing.

9 There was concern about the increased testing load and time involved with this proposed verification method. A portable pH meter could be used to evaluate the method/results as compared to the current slurry method.

[http://www.analyticon.com/analyticon/products/laboratory/HM17MXMetoxy\\_main.htm](http://www.analyticon.com/analyticon/products/laboratory/HM17MXMetoxy_main.htm)

- 10
- Temperature Uniformity- Given the current load densities on the racks, the product is packed together and there is minimal space for air transfer between the pieces/sticks. The internal temperature probes are placed in pieces at the front of the oven out in the open air-stream. Does this adequately represent the product in the middle of a densely packed rack? Management needs to have validation on file that shows the target internal temperatures are being achieved throughout the mass of the house. Data-Trace probes can be a very useful tool to plot the internal temperature curves. <http://www.masy.com/data-loggers/datatrace-micropack-iii-temperature-data-logger>

- 11
- pH Targets- The current control point is to achieve a pH of 4.64 or less in fermentation before commencing the kill step. The pH continues to drop until the bacteria is inactivated and finished product pH's are typically in the range of 4.2-4.5. While this may be a management/marketing decision to be in this range there may be some opportunity to raise the pH limit to something like 4.7 or 4.8 and shave off some fermentation time. This would need to be tested to verify you are still finishing in a desired range for finished product and that you meet other quality and HACCP related criteria. This is also dependent upon all blends reaching the control point as described earlier. The optimum pH for sausage to give up water is approx. 4.6, so finishing at a little higher pH may have a slight positive impact on drying as well.

- 12
- Fermentation Abnormality SOP- It is recommended that a written SOP be developed for handling process irregularities and failures. There are potentially many reasons why a product may not ferment properly. Having a protocol established on what to do, what to test, corrective actions to take, etc. can be a useful tool. It was learned that no sampling has been done on fermented product for C.P. Staph and this would be important to test for in any abnormal fermentation in order to assess product safety. I will provide an example SOP for consideration.

- **Dry Rooms- Overview-** The dry rooms offer multiple challenges. The "slow rooms" are not designed for adequate air volume or distribution to handle the product load. There is a severe mold problem in the plant which we learned was enhanced by the increased volume and the hot/humid conditions over the summer.

The plant is still trying to get out from under the problems associated with this situation. That being said, there needs to be a full court press on dealing with the mold. Responses can be:

- 13.
  - Additional floor fans to create turbulence
  - Spreading product out to increase airspace/reduce load
  - Moving product to fast rooms

14. During observations, some fans were not running, fresh product was being loaded into problem sections, and there was concern that one room (7) was not operating at optimum (75-80% RH for 2 days). There was no good way to verify what room set points were or whether they were being achieved in the slow dry rooms.

- 16.
  - Dry Room Controls- New control systems need to be installed in the slow rooms to adequately measure and control required conditions. This should be a high priority. Control systems in the fast rooms need to be closely monitored to assure set points are being met and the rooms have the required response time capability.

- x
  - Air Flow- Prem is addressing testing protocol in #4 (VFD and increased air volume- See Prem's report.)

- 17.
  - Space @ rear of sections- the hand loading of the bays means that there is open space at the rear top and middle product layers to facilitate loading access. This space is more than what would be generally needed and it was suggested to add a few sticks at the rear in DRM 9 A & B to the equivalent of one more rack capacity per bay. This would be tested and monitored closely to assure the rooms can handle the additional load and that drying is not compromised.

- 18.
  - Dry Room Monitoring- Currently several people and departments are involved in the dry room function and operation. What is lacking, I believe, is a coordinated effort to manage, monitor, and optimize the drying conditions in the rooms. This is where a dedicated process control person(s) would be of tremendous value. Given appropriate and accurate measuring systems, one can evaluate the dry room operations to assure they are meeting set points and that product is put in proper locations, and products are drying per expectations. If conditions are not right, corrective actions can be implemented. Obviously, variability in means more variability out, given the current design and limitations of the process. However, reducing variability at every stage possible will improve plant performance.

- 19.
  - **Moisture-Protein Ratio vs. Firmness-** The current practice is to release the product for packaging once it reaches the moisture-protein ratio specification. This varies significantly within the lot due to the inherent variability from fat control to oven process to dry room differences. In order to reach the firmness target and slice separation, the product must be dried further, and given the variability, it is not uncommon to see M/P ratios on pepperoni range from 1.0 to 1.5:1 at pack.

Drying product down that far is resulting in very large yield losses, not to mention the variability of product sent to the customer. One primary reason for the softness at release is the high pork content. This begs the question that if the product was formulated with a higher percentage of beef, would the product be firm enough at a higher M/P ratio? Would the increased finished yield more than make up for the higher cost of formulation? The higher beef content would also facilitate processing, reduce greasing, and ultimately reduce variability. This question is something to consider and costs should be looked at, tests run, etc. (another prime reason for a process control function).

One drawback to this approach is that the formulation conveyor is very limiting in terms of the number of vats that can be staged. The more allowable raw material types, the more the juggling of vats results. Given the design and floor space, the formulation conveyor is very limiting in flexibility.

• **Additional Misc. Comments on Sanitation/GMP's-**

- 20 ○ Rack of product staged at floor foam sanitizer station. Foam sprayed onto wheels and frame of rack.
- 21 ○ Racks of product staged at battery charging area- non product zone.
- 22 ○ Water on floor in pack room and aisle ways- the water from the shower cabinets provides water and aerosol to a large area in the pack floor. This water gets tracked around and presents an environmental challenge for pathogen control. While the floor results are good regarding control of Listeria, the constant wet conditions present a difficult issue to manage, as there are no drains in the immediate area.

The ultimate goal is to eliminate the water sprays altogether. Short of that, reduced water flow, pressure, and frequent floor sanitizer applications may help.

- **Summary-** While overall, the products looked good, the major opportunity is to reduce the process variability. This ultimately results in over-dried product and substantial loss of yield, not to mention inconsistent quality delivered to the customer. Over drying is the reaction to soft textured product of high pork formulation, characterized by huge variations in fat content and drying rates. This certainly is nothing new to your organization. You have been accommodating a process with severe limitations. Perhaps the ideas and controls discussed in the plant review may be useful in gaining more control and reacting to process deficiencies.

Let me know if you have any questions regarding this information. Thank you for the opportunity to work with your organization.

Stan Seavey, Food Safety & Quality Consultant  
Process Quality Consulting, LLC



Category	#	Source	#	Source	#	DIFFICULTY	PRIORITY	Topic	Person Responsible	Status	Due date:	Comments	Completed:	Date
Dry Rooms - Slow		P1	5				X	CONSOLIDATE SLOW ROOMS TO REDUCE BY 1	Keith/Chris		01/04/13			
Dry Rooms - Slow	1.0	P1	2			H	3	Moisture Removal Gradient (Temp / Humidity)	Gary		11/30/12			
Dry Rooms - Slow	1.1	P1	5			H	1	Increase air flow CFM & FPM to target 15% reduction in dry time	Chris		12/03/12			
Dry Rooms - Slow	1.2	P2	3	SS	13	L	1	Large Fans for Testing (DR #4) / Increase Product Spacing	Chris		11/05/12			
Dry Rooms - Slow	1.3	P2	2			L	1	Increase Fan Speed (capacity of ref. unit fans)	Chris		11/05/12	Chris already changed ratio of sheaves-checking with mfg to see if VFD could be added		
Dry Rooms - Slow	2.0	P2	5			M	2	Defrost Cycle / Faster De- Humidification	Chris/PD		11/05/12	Looked at it briefly. Need to see if we can get longer		
Dry Rooms - Slow	2.1	P2	2			M	1	Blast Chiller Temperature Impact on Dry Room Defrost Cycles	Chris / Jim		11/05/12	Test to see determine true chill time		
Dry Rooms - Slow	4.2	P1	5			M	3	Model Dry room space requirements @ 15% faster dry time.						
Dry Rooms - Slow	4.1	P1	5			M	4	Plan to convert slow to fast (CAPEX)						
Dry Rooms - Slow	1.1	P2	9			H	3	Management / Improvement / Upgrade Plan	Gary/Paul R/Chris		11/05/12			
Dry Rooms	5.0	P2	1	SS	17	M	1	Loading Density - Increase #9A - 9B	Keith/Paul/Chris		10/19/12	This is already in place. Need to create an evaluation of room performance.		
Dry Rooms	6.0	P2	4			H	3	M&P Curve for 1 product (29319) high frequency testing.	Paul R/Jim		10/12/12	Create a testing protocol by 10/12 - complete testing by 11/2.		
Dry Rooms	7.0	P1	1			M	2	Zone by Zone Loading Process	Keith/Keim/Ra ndy		11/02/12	Create a method to empty/replace zones - specifically Room #9.		
Dry Rooms	8.0							DRY ROOM PROCESS CONTROL						
Dry Rooms	8.1	P2	11	SS	18	M	1	Process Control Position	Paul R/Paul S		11/19/12	Define Role / Determine Need		
Dry Rooms	8.2	P2	8			M	1	Who is monitoring, recording, and controlling			11/19/12	See above.		
Dry Rooms	8.3	SS	15			L	1	#7 at 75-80% Relative Humidity			11/19/12	How often does this happen?		
Dry Rooms	8.4	P2	7	SS	16	M	2	Control System / Process / measurements - Wet/Dry Bulb	Chris		11/30/12			
Dry Rooms	9.0	P2	6	SS	14	L	1	Fans Not Working	Chris		10/19/12	Add new oscillating fans in slowest slow rooms. Combine parts from remaining fans for remaining houses.		
Fermentation	1.0	P2	14			L	1	3rd Party review - Marlen	Chris					
Fermentation	1.0	P2	14			L	1	3rd Party review - Alkar	Chris					
Fermentation	2.0	P2	13			M	2	Training: Calibration / Balance / Etc. - MARLEN	Chris					
Fermentation	2.0	P2	13			M	2	Training: Calibration / Balance / Etc. - ALKAR	Chris					
Fermentation	3.0	SS	7			M	1	Loading Density & Balance - Options to Eliminate touching product	Keith					
Fermentation	3.1	SS	7			H	3	Fermentation Cycle Option Testing	Keith			After Completion and evaluation of items above.		
Fermentation	4.0	X	X	X	X	X	X	PROCESS CONTROL						
Fermentation	4.1	SS	8			M	1	Ph Control / Measurement	Jim		10/12/12	Need Portable Meter		
Fermentation	4.2	SS	10			M	1	Temperature Checks / Procedure / Probes	Jim			Validation of Smokehouse Temperatures throughout house to ensure we are hitting temperature targets.		

Category	#	Source	#	Source	#	DIFFICULTY	PRIORITY	Topic	Person Responsible	Status	Due date:	Comments	Completed Date
Formulation	1.0	P2	10	SS	3		x	FAT % MIX / MATCH CONTROL	Keith/Kevin/Randy			Get Kevin & Randy involved in solution.	
Formulation	1.1	x	x	x	x	M	1	Fat % Mix/Match Control - Raw Ingredients	Jim/Don/Mike		10/19/12		
Formulation	1.2	SS	4			M	1	Fat % Control - Use of Anal Ray on Frozen	Jim		10/12/12	Under review, machine cost ~\$50,000. Requires shielding.	
Formulation	1.3	SS	5			L	1	Process - 2nd shift formulating from Memory	Keith/Kevin/Randy		10/17/12	New Formulation Forms (Auger) will address this.	
Formulation	2.0	P1	9			L	0	Final Grind over emulsification	Chris		12/31/12	New Grinder on Order.	
GMP	1.1	SS	20			L	1	Racks Staged in Foamer	Keith/Jim		10/12/12	Jim to create solution - Keith to enforce.	
GMP	1.2	P1	10	SS	21	L	1	Racks Staged in Battery Charging / Wash Cabinet Area	Keith/Jim		10/12/12		
GMP	2.1	SS	2			L	1	Rework age limit	Jim		10/12/12		
GMP	2.2	P1	11			L	1	Rework Storage near Dry Rooms	Keith/Jim		10/12/12		
GMP	2.3	P1	12			L	1	Rework usage / batch = limits	Keith/Kevin/Randy		10/12/12		
GMP	3.0	P2	17			M	1	Procedure for Mold control / clean up.	Keith/Jim/Kevin/Randy		10/17/12	Clean dry rooms being repaired while they are empty. Investigate how mold spreads.	
GMP	4.0	SS	12			M	2	Sampling for CP Staph / Abnormal Fermentation / HACCP Procedure	Jim		10/19/12	Change HACCP procedure for Abnormal runs to test for pathogens before Kill Step	
Handling	1.0	P1	3			M	3	JIT Transfer from Dry > Stage > Chill > Slice	Keith / Mike		10/17/12	May not complete JIT transfers, but planning needs to tighten up in order to ensure rack availability when adding additional smoke house capacity.	
Handling	1.1	P1	4			M	5	Wrap staged product to reduce yield loss	Keith/Paul R			Is this useful if we start turning racks faster?	
Peeling	1.0	P2	12	SS	22		x	REDUCE WATER USAGE AT PEELING	Keith		10/19/12		
Peeling	1.1	P1	6			L	2	Spray Systems	Keith/Chris		10/12/12	Schedule Spraying Systems to plant week of 10/8	
Peeling	1.2	P1	6			L	2	Water Vapor method	Keith/Chris		10/12/12	Get details from Prem	
Peeling	1.3	x	x	x	x	H	3	Dry Peel Castings	Keith			Visa Standing Test (Stuffing) week of 10/8	
Product	1.0	SS	19			H	3	M:P vs Firmness - more beef?	Garry/Behan/Keith		12/03/12	Run tests - after other process variables are tightened.	
Product	2.0					H	2	Firmness / Hardness Testing / M:P Correlation			12/14/12	Hardness Meter on order	
Product	2.0	SS	11			H	3	Ph Target evaluation	Garry/Behan/Jim		12/14/12	Run tests.	
RAW	1.0	SS	1			L	1	Raw Material Rancidity / Age Limit	Jim		10/19/12	Establish firm sensory (visual / odor) requirements	
Slice Yield	1.0	P1	7				4	Large Diameter - Weber Slicer - Gripper re-design, or ?	Garry/Keith/Paul R		12/03/12		
Slice Yield	2.0	P1	8				5	Small Diameter - Pre Docking?	Garry/Keith/Paul R		12/03/12	Can we get a dock to try?	
Stuffing	1.0						x	CLIPPER EFFICIENCY / UPTIME	Mark / Keith / Chris		12/03/12		
Stuffing	1.1	P2	16	SS	6	M	1	Start / Stop of stuffer creating smear - run at constant ideal speed	Mark / Keith		12/03/12		
Stuffing	1.2					L	1	CLIP & LOOP Receiving Standards	Mike / Keith / Chris / Kevin				
Stuffing	1.3					M	1	Clipper Mechanical Issues - Spare Parts / Tolerances / PM's	Chris / Keith / Kevin				
Tools	1.0	P2	15	SS	9	L	1	Velometer, Pt Meter(www.aanalyticon.com), Humidity, Temperature (www.massey.com)	Jim		10/19/12	Chris &/or Jim to get prices.	

Documents I created  
and provided to  
Ligumia as follows  
to my plant report.

---

**From:** "Stan Seavey" <sjseavey@grics.net>  
**Date:** Tuesday, September 25, 2012 8:14 PM  
**To:** "Jehan Saulnier" <JSaulnier@liguriafood.com>  
**Cc:** "Prem Singh" <psingh@vistapackaging.com>; <gpiearson@liguriafood.com>  
**Attach:** Process Control Technician.doc; SOP-Process Abnormalities.doc  
**Subject:** Process Control & Process SOP

Jehan,

Attached are two documents which concern Process Control and process abnormalities. I mentioned these in my trip report. These are just examples that you may use to craft your own documents regarding these issues. As Prem indicated in his report, a defined Process Control staff is highly recommended to help monitor and evaluate processing parameters and assist in process optimization. The major advantage a person in this role can provide is a continual product-process focus that is lacking. The second document is a SOP on process abnormalities. This again is an example of how the plant would respond in product safety issues relative to fermentation/heat treatment. You would want to customize these to your operation and include more specific detail on standard pH time/temperature degree hours for your culture and process, etc. I hope these may be of use to you as you develop your own controls and documentation. Thanks.

Stan Seavey



## **Process Control Technician**

### **Description:**

The Process Control function has the responsibility to monitor control points and manufacturing conditions within the plant to assure product is being made according to specified instructions. This function will assist operations management, Quality Control, maintenance, and hourly personnel in providing technical support and process optimization.

This person provides a technical oversight of the entire manufacturing operation and must have the ability and authority to take appropriate notification action with operations and QC to assure compliance to procedures and operating conditions.

### **Reports To:**

The Process Control function reports directly to the quality function with a dotted line to operations management.

### **Responsibilities:**

- Monitor control points throughout the manufacturing process from raw material up to packaging.
- Assist in training line employees on how to measure and document their own work processes.
- Coordinate all plant testing regarding process variables.
- Evaluate product in-process to assure optimum conditions are being achieved.
- Provide operations management with problem-solving expertise on processes and problem products.
- Evaluate defective and downgraded product to determine corrective actions.

## **Standard Operating Procedure: Process Abnormalities**

### **Scope:**

Control of the fermentation of dry sausage is critical to the safety of the product. When a smokehouse operator observes process abnormalities he must be able to assess the nature of the problem, notify appropriate management staff, take necessary steps to minimize any negative effects, and collect samples for possible follow up testing. Such process abnormalities may include mechanical malfunctions of the oven, failure of the product to achieve targeted pH in the specified time, power failures, water leaks, or the like.

### **Inability to maintain controlled conditions:**

If the temperature is uncontrolled and the dry bulb exceeds set point by 5 degrees or more for an hour or greater, the house must be shut down. Product may be moved to another smokehouse to continue the process. After the product pH reaches 5.3 or below, collect 15 samples from the house to be tested for C.P. Staph.

### **Failure to reach targeted pH in prescribed time:**

If the product pH is not dropping per normal scheduled time range, determine if the problem is with a specific blend, or a range of pH's within each blend or with multiple blends in the house. If the problem is with a specific blend only it may be the result of a formulation issue, culture issue, or salt/spice/carbohydrate issue. Normal blends may be isolated in order to continue the process. Blends not reaching pH targets will be sampled for C.P. Staph as above.

### **Power failures:**

If a power failure occurs in the fermentation cycle before the pH has reached 5.3, keep the house closed and monitor surface temperatures at the upper levels of the house to assure temperatures are below upper limit for the culture growth. If temperatures exceed the criteria take action to lower temperatures if possible such as opening doors or moving product to another location. If product temperature exceeds set point by 5 degrees or more for an hour or greater, collect 15 samples to be tested for C.P. Staph.

### **Water leaks:**

Showers may leak on product for an extended time during the fermentation or heat process, or there may be an overflow of the wet bulb reservoir that leaks onto product. These can be hazardous in that they leach out salt from the product and may create conditions for growth of undesirable organisms such as yeast or coliform bacteria. Such product must be identified and isolated for possible further testing to determine acceptability.

### **Other:**

If any off-color product is observed such as brown streaking, or off-odors are detected, notify management and determine if it is associated with a particular blend(s), formulation, or oven. Take appropriate investigative samples for testing and collect samples for possible microbiological analysis prior to the heat-treatment step.

Process data shared  
by Ligenia with me  
during plant visit.

Dry Room Capacity

19319CP

Dry Room	Room type	Bays	Racks/ Bay	Racks	Sticks/ Rack	Sticks	Pieces/ Stick	Pieces	lbs/ piece (Fresh)	Total lbs (Fresh)	lbs/ piece (Dry)	Total lbs (Dry)	lbs/ piece (Avg)	Total lbs (Avg)
Room 1	Slow	40	3	120	28	3,360	8	28,880	5.70	153,216	3.99	107,251	4.845	130,234
Room 2A	Fast	44	3	132	28	3,696	8	29,568	5.70	168,538	3.99	117,976	4.845	143,257
Room 2B	Fast	44	3	132	28	3,696	8	29,568	5.70	168,538	3.99	117,976	4.845	143,257
Room 3	Fast	44	3	132	28	3,696	8	29,568	5.70	168,538	3.99	117,976	4.845	143,257
Room 4	Slow	54	3	162	28	4,536	8	36,288	5.70	206,842	3.99	144,789	4.845	175,815
Room 5	Slow	55	3	165	28	4,620	8	36,960	5.70	210,672	3.99	147,470	4.845	179,071
Room 6	Fast	36	3	108	28	3,024	8	24,192	5.70	137,894	3.99	96,526	4.845	117,210
Room 7	Slow	33	3	99	28	2,772	8	22,176	5.70	126,403	3.99	88,482	4.845	107,443
Room 8	Fast	40	3	120	28	3,360	8	26,880	5.70	153,216	3.99	107,251	4.845	130,234
Room 9A	Fast	56	3	168	28	4,704	8	37,632	5.70	214,502	3.99	150,152	4.845	182,327
Room 9B	Fast	56	3	168	28	4,704	8	37,632	5.70	214,502	3.99	150,152	4.845	182,327
Total		502		1,506		42,168		337,344		1,922,861		1,346,003		1,634,432

## LIGURIA FOODS, INC.

**Name: Pepperoni****EFFECTIVE DATE: 03/13/08****FORMULA #: 19319****REVISION NO:**

Used for: Pepperoni

Pepperoni	19319 Pepp. Sliced
	19357 Pepp short stick(vac stick) DELALLO
	19335 Pepp special sliced 4/5

**INGREDIENTS: Pork, Beef, Salt, Spices, Sugar, Lactic Acid Starter Culture, Extractive of Paprika, Garlic Powder, Spice Extractives, Sodium Nitrite, BHA, BHT, Citric Acid**

<b>MEAT BLOCK:</b>	<b>BLOCK</b>	<b>Code</b>
Beef XF	120	
80% Pk Trim (Fz)	420	
Combo Pk 80%	1910	
Total	2450	

Water	3 qts.	
Culture	250 grams	

<b>SPICES TO BE ADDED:</b>		
Pepp Spice	33.075 x 2	Griffith 0170975-00
Salt	60	
Cure	14	Griffith 032-0096
Total	2550.2#	

**Trimming, Grinding, Mixing, Injection, Stuffing Procedures:**

- 1.) Grind meat through 2 mm plate
- 2.) Add spice salt, cure to ground meat as it goes up the belt to mixer.
- 3.) Dilute culture 250 gr to 3 qts water.
- 4.) Mix for 4 min.
- 5.) Transfer to 350# Vemag tubs. 7 tubs per blend.
- 6.) Stuff into casings.
- 7.) Move to smoker

<b>WIP</b>	<b>Product Description</b>	<b>Casing Size:</b>	<b>Casing Code:</b>
19329	BAYER	1 X 51	60470JCLC0515

LIGURIA FOODS, INC.

19329	Bayer 1 x110' Shirred	1 x110'	6048JCLA0110
19357	DELALLO BAYER	1sx110'	60450DCLN0110
19335	BAYER	4/5Lx54	60390ACLA0110

**Equipment Specifications:**

Horn Size:	28 mm	Twists:	
Chuck Size:	28 mm	Target Stuff Wt.:	5.7#
Stuff Length:	48 inches	Hanger length apart:	2 inches
19335 4/5	22 mm	3.0 #	48 inches
DELALLO 19357	22 mm	PRINTED 1S X 110' 2.2#	20 inches

**Smoke Mixture Specifications:**

Amount of Water:		Dwell Time:	
Amount of Smoke:	NA	Type of Smoke:	
Amount of Citric Acid:		Target pH:	4.6
Natural Smoke	NA		

**Cooking/Drying Procedure Description:**

**Cook Cycle:**

Time	Dry Bulb	Wet Bulb	% Relative Humidity
SEE SMOKEHOUSE SCHEDULE			

**Finished Temperature**

**Storage:** Dryroom for ca. 15 days at 55-60 wet/dry bulb temperature until M:P<=1.6:1. Heat treat to 135F internal for 15 min.

**Approved By:**

Operations: \_\_\_\_\_

Quality Assurance: *Jim Whitham*



## PC5000 Print Program Review

Program# 1: 19319 Pepp HT HighT

	TYPE	EVENT	TIME	INT	DRY	WET	% RH	SMOKE	DWEL	DAMPER	OPTION	FAN
1	COOK		180	0	110	107	90	NONE	0	AUTO	H	0
2	COOK		480	0	111	108	90	NONE	0	AUTO	H	0
3	COOK		300	0	114	110	88	NONE	0	AUTO	H*	0
4	COOK		30	0	132	130	94	NONE	0	AUTO	H*	0
5	COOK		120	137	150	142	80	NONE	0	AUTO	H*	0
6	COOK		20	0	140	140	100	NONE	0	AUTO	H*	0
7	COOK		5	0	30	0	0	STEAM	0	AUTO	1	0
8	C SHWR	1 4 6	120	80	1	4	0	NONE	0	AUTO		0
9	COOK		180	0	80	0	0	NONE	0	AUTO		0

Link1: NONE Link2: NONE

### EVENTS

- 1 = Reverse Internal
- 2 = Refrigeration Dry
- 3 = Refrigeration Wet
- 4 = Fan On
- 5 = Intermittent Fan
- 6 = Intermittent Shower

### OPTIONS

- A = Auto Damper O = Open Damper
- C = Closed Damper H = Humidity
- 1 = Output 1 2 = Output 2 3 = Output 3
- \* = Hold and Maintain
- # = Hold and Minimize
- S = Require Supervisor Password for Hold
- I = Require Internal Temperature for Hold



Production Lot:	Production Batch:	Pack Date:	Moisture	Protein	M:P	Fat	Salt	pH
2012205	192847	8/1/2012	32.98	21.87	1.51	37.64	3.56	4.52
2012198	192847	8/1/2012	28.64	23.15	1.24	40.71	3.62	4.43
2012208	192848	8/2/2012	30.41	22.13	1.37	40.32	3.83	4.43
2012206	192849	8/3/2012	30.41	22.13	1.37	40.32	3.83	4.43
2012207	192849	8/3/2012	28.96	21.99	1.32	41.94	3.51	4.34
2012207	192850	8/4/2012	28.96	21.99	1.32	41.94	3.51	4.34
2012206	192852	8/6/2012	30.41	22.13	1.37	40.32	3.83	4.43
2012206	192852	8/6/2012	30.41	22.13	1.37	40.32	3.83	4.43
2012209	192853	8/7/2012	28.66	22.67	1.26	41.03	3.93	4.33
2012209	192853	8/7/2012	28.66	22.67	1.26	41.03	3.93	4.33
2012207	192854	8/8/2012	28.96	21.99	1.32	41.94	3.51	4.34
2012210	192854	8/8/2012	28.86	22.65	1.27	40.59	3.83	4.26
2012210	192854	8/8/2012	28.86	22.65	1.27	40.59	3.83	4.26
2012212	192855	8/9/2012	31.46	22.49	1.4	38.28	3.13	4.37
2012212	192856	8/10/2012	31.46	22.49	1.4	38.28	3.13	4.37
2012213	192856	8/10/2012	31.24	22.59	1.38	37.98	3.84	4.37
2012208	192857	8/11/2012	33.8	21.27	1.59	38.33	3.41	4.43
2012214	192857	8/11/2012	28.51	22.58	1.26	40.65	3.46	4.25
2012208	192859	8/13/2012	33.8	21.27	1.59	38.33	3.41	4.43
2012217	192859	8/13/2012	32.53	22.43	1.45	37.33	3.98	4.4
2012216	192860	8/14/2012	32.08	22.84	1.4	37.45	3.88	4.48
2012217	192860	8/14/2012	32.53	22.43	1.45	37.33	3.98	4.4
2012212	192861	8/15/2012	31.46	22.49	1.4	38.28	3.13	4.37
2012213	192861	8/15/2012	31.24	22.59	1.38	37.98	3.84	4.37
2012217	192862	8/16/2012	32.53	22.43	1.45	37.33	3.98	4.4
2012219	192863	8/17/2012	30.33	21.16	1.43	41.72	3.57	4.39
2012220	192863	8/17/2012	28.35	22.88	1.24	40.69	3.61	4.38
2012221	192863	8/17/2012	30.51	22.84	1.34	38.74	4.25	4.31
2012219	192866	8/20/2012	30.33	21.16	1.43	41.72	3.57	4.39
2012220	192866	8/20/2012	28.35	22.88	1.24	40.69	3.61	4.38
2012217	192866	8/20/2012	32.53	22.43	1.45	37.33	3.98	4.4
2012220	192867	8/21/2012	28.35	22.88	1.24	40.69	3.61	4.38
2012221	192867	8/21/2012	30.51	22.84	1.34	38.74	4.25	4.31
2012222	192868	8/22/2012	25.81	23.89	1.08	41.94	4.97	4.18
2012222	192869	8/23/2012	25.81	23.89	1.08	41.94	4.97	4.18
2012223	192869	8/23/2012	29.22	23.34	1.25	38.46	4.5	4.27
2012221	192869	8/23/2012	30.51	22.84	1.34	38.74	4.25	4.31
2012223	192870	8/24/2012	29.22	23.34	1.25	38.46	4.5	4.27
2012223	192870	8/24/2012	29.22	23.34	1.25	38.46	4.5	4.27
2012226	192871	8/25/2012	27.68	23.41	1.18	41.22	4.83	4.37
2012224	192871	8/25/2012	26.66	23.55	1.13	41.65	4.29	4.39
2012227	192873	8/27/2012	27.74	23.22	1.19	40.85	4.16	4.31
2012228	192874	8/28/2012	29.77	21.41	1.39	39.45	4.87	4.47
2012229	192875	8/29/2012	24.29	24.33	1	42.64	4.14	4.35
2012227	192875	8/29/2012	27.74	23.22	1.19	40.85	4.16	4.31
2012226	192876	8/30/2012	27.68	23.41	1.18	41.22	4.83	4.37
2012233	192876	8/30/2012	29.2	22.21	1.31	41.11	4.8	4.31
2012229	192876	8/30/2012	24.29	24.33	1	42.64	4.14	4.35
2012213	192877	8/31/2012	31.24	22.59	1.38	37.98	3.84	4.37
2012229	192877	8/31/2012	24.29	24.33	1	42.64	4.14	4.35
2012234	192877	8/31/2012	33.06	21.09	1.57	38.41	4.35	4.43



ProdNum	Description	TargetWt	Wip Code	Wip Desc	Sum of Netwt	Total Days	Dry Room Days	Type	% Type	Calc days	Days Grap
38064	FOR FURTHER PROCESSING Peeled Pepperoni	1703	29329 & 29319	Bulk Sliced Pepperoni	3,068.0	18.3	17.5	Main Pepp	0.0%	0.01	17 days
39002	BIG MAMAS & PAPAS SLICED PEPPERONI 2/12.5#	25	29385	Great Kitchen	18,069.3	17.6	16.8	Main Pepp	0.2%	0.01	16 days
39106	TESOROS Sliced Pepperoni 2/10#	20	29387	Gratifica Pepperoni	1,285.0	17.8	16.8	Main Pepp	0.0%	0.00	16 days
39109	AQUILA Diced Sliced Pepperoni	25	29329 & 29319	Bulk Sliced Pepperoni	3,000.0	17.4	16.4	Main Pepp	0.0%	0.00	16 days
39200	LIGURIA DICED PEPPERONI 2/5#	25	29319	Diced Pepperoni	7,190.3	15.2	14.2	Main Pepp	0.1%	0.01	14 days
91851	LIGURIA SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	3,390.4	15.0	14.0	Main Pepp	0.0%	0.00	14 days
35085	LUGI-PEPPERONI 1/8 CT 4/5# BAGS FONTE ARGENTO	20	29387	Gratifica Pepperoni	8,052.7	14.9	13.9	Main Pepp	0.1%	0.01	13 days
30027	BY-GEORGE SLICED PEPPERONI 12 COUNT	10	29329 & 29319	Bulk Sliced Pepperoni	19,114.9	14.8	13.8	Main Pepp	0.2%	0.03	13 days
30031	NNOS SLICED PEPPERONI	10	29329 & 29319	Bulk Sliced Pepperoni	3,998.9	14.8	13.8	Main Pepp	0.0%	0.01	13 days
92136	IMPERO SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	16,180.5	14.8	13.6	Main Pepp	0.2%	0.02	13 days
35024	DELALLO SLICED PEPPERONI 2/5#	10	29329 & 29319	Bulk Sliced Pepperoni	16,947.5	14.6	13.6	Main Pepp	0.2%	0.03	13 days
35001	SANSONE Sliced Pepperoni 2/5#	10	29329 & 29319	Gas Flushed Sliced Pepperoni	18,573.4	14.4	13.4	Main Pepp	0.1%	0.02	13 days
92145	DEL CAPRIS Sliced Pepperoni 2/5#	10	29329 & 29319	Gas Flushed Sliced Pepperoni	14,004.5	14.0	13.0	Main Pepp	0.1%	0.02	13 days
38030	LIGURIA STICK PEPPERONI COMBO Peeled For Further Processing	1612	29329 & 29319	Bulk Sliced Pepperoni	6,992.0	14.0	13.0	Main Pepp	0.1%	0.01	13 days
30078	INDIGO SLICED PEPPERONI 2/5# GF	10	29387	Gratifica Pepperoni	2,890.0	14.0	13.0	Main Pepp	0.0%	0.00	13 days
34048	Antoniolo Sliced Pepperoni 4/5#	20	29387	Gratifica Pepperoni	1,068.9	14.0	13.0	Main Pepp	0.0%	0.00	13 days
30072	GRATIFICA Diced Gratifica Pepperoni 1/4 inch	10	29387	Gratifica Pepperoni	60.0	14.0	13.0	Main Pepp	0.0%	0.00	13 days
39176	GRATIFICA SLICED PEPPERONI 12 CT 2/5# GAS FLUSH	10	29329 & 29319	Gas Flushed Sliced Pepperoni	4,151.4	13.9	12.9	Main Pepp	0.0%	0.01	12 days
30070	LIGURIA DICED PEPPERONI GAS FLUSH 2/5#	10	29319	Diced Pepperoni	970.8	13.9	12.9	Main Pepp	0.0%	0.00	12 days
38068	LISANTIS Sliced Pepperoni 2/10#	20	29387	Gratifica Pepperoni	11,456.3	13.8	12.6	Main Pepp	0.1%	0.01	12 days
36121	Venezuela Sliced Pepp 2/12.5#	25	29387	Gratifica Pepperoni	8,045.1	13.8	12.6	Main Pepp	0.1%	0.01	12 days
35049	LIGURIA Sliced Pepperoni 12 (2-1.5#)	35	29329 & 29319	Bulk Sliced Pepperoni	10,833.6	13.7	12.7	Main Pepp	0.0%	0.00	12 days
39104	LUGI-PEPPERONI Sliced Irregular 25 LB BAG	25	29329 & 29319	Bulk Sliced Pepperoni	2,201.2	13.7	12.7	Main Pepp	0.1%	0.01	12 days
36116	BELLISSIMO SLICED PEPPERONI 2/12.5#	25	29329 & 29319	Bulk Sliced Pepperoni	17,121.5	13.6	12.6	Main Pepp	0.2%	0.02	12 days
30036	BELLISSIMO SLICED PEPPERONI 13 CT	10	29329 & 29319	Bulk Sliced Pepperoni	9,748.4	13.6	12.6	Main Pepp	0.1%	0.01	12 days
36038	MAZZELLAS SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	3,788.6	13.6	12.6	Main Pepp	0.0%	0.00	12 days
36029	RED BRICK PIZZAGOURMET SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	6,487.8	13.5	12.5	Main Pepp	0.1%	0.01	12 days
38078	LIGURIA Sliced Pepperoni 2/5#	25	29329 & 29319	Bulk Sliced Pepperoni	15,811.2	13.4	12.4	Main Pepp	0.2%	0.02	12 days
36130	ROYAL'S PIZZERIA 2/12.5# 13CT SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	17,583.0	13.3	12.3	Main Pepp	0.2%	0.02	12 days
92235	ANCHINI BROS. SLICED PEPPERONI	10	29329 & 29319	Bulk Sliced Pepperoni	10,437.1	13.3	12.3	Main Pepp	0.1%	0.01	12 days
30048	BARI FOODS Sliced Pepperoni 10#	10	29329 & 29319	Bulk Sliced Pepperoni	4,747.3	13.2	12.2	Main Pepp	0.0%	0.01	12 days
92229	BELLISSIMO SLICED PEPPERONI 12 COUNT	25	29329 & 29319	Bulk Sliced Pepperoni	10,787.9	13.1	12.1	Main Pepp	0.1%	0.01	12 days
30056	ROMA-PEPPERONI DICED 1/4" 10 LB BAG	10	29319	Diced Pepperoni	120.0	13.0	12.0	Main Pepp	0.0%	0.00	12 days
91852	LIGURIA SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	18,182.8	13.0	12.0	Main Pepp	0.2%	0.02	12 days
35052	Gratifica Sliced Pepperoni 12/5# GF	10	29387	Gratifica Pepperoni	4,188.7	12.9	11.8	Main Pepp	0.0%	0.00	11 days
39086	ROMA-PEPPERONI Sliced Thin 16 CT 2/12.5 LB BAGS	25	29329 & 29319	Bulk Sliced Pepperoni	12,829.2	12.9	11.8	Main Pepp	0.1%	0.02	11 days
91659	STEFANO SLICED PEPPERONI 2/5# GF	10	29329 & 29319	Gas Flushed Sliced Pepperoni	12,745.5	12.9	11.8	Main Pepp	0.1%	0.01	11 days
30050	BELLISSIMO SLICED PEPPERONI	10	29329 & 29319	Bulk Sliced Pepperoni	8,818.3	12.9	11.8	Main Pepp	0.0%	0.00	11 days
39133	Jena's Razorback Sliced Pepperoni	25	29387	Gratifica Pepperoni	7,896.0	12.8	11.8	Main Pepp	0.1%	0.01	11 days
35015	BERKSHARD Sliced Pepperoni 2/5#	10	29329 & 29319	Gas Flushed Sliced Pepperoni	2,851.5	12.8	11.8	Main Pepp	0.0%	0.00	11 days
35012	MONTESOLDI SLICED PEPPERONI 2/5# UNITS	10	29329 & 29319	Gas Flushed Sliced Pepperoni	12,254.1	12.7	11.7	Main Pepp	0.1%	0.01	11 days
35018	RAV'S PIZZA SLICED PEPPERONI 2/5# UNITS	10	29329 & 29319	Gas Flushed Sliced Pepperoni	8,130.1	12.7	11.7	Main Pepp	0.1%	0.01	11 days
39044	STRAW HAT PIZZA 2/12.5# SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	20,306.0	12.7	11.7	Main Pepp	0.2%	0.02	11 days
36044	ROMA-PEPPERONI Sliced 16 CT 2/5 LB BAGS	25	29329 & 29319	Gas Flushed Sliced Pepperoni	5,137.6	12.7	11.7	Main Pepp	0.1%	0.01	11 days
30035	MINEOPREMIUM SLICED PEPPERONI	10	29329 & 29319	Bulk Sliced Pepperoni	5,962.4	12.7	11.7	Main Pepp	0.1%	0.01	11 days
38020	LIGURIA Sliced Pepperoni 2/12.5#	10	29329 & 29319	Bulk Sliced Pepperoni	19,004.5	12.6	11.6	Main Pepp	0.2%	0.02	11 days
35116	Gratifica Sliced Pepperoni 12/10# 14ct	20	29387	Gratifica Pepperoni	4,750.5	12.5	11.6	Main Pepp	0.0%	0.01	11 days
35035	SAHARA PIZZA Sliced Pepperoni 2/12.5#	25	29329 & 29319	Bulk Sliced Pepperoni	10,148.0	12.4	11.4	Main Pepp	0.1%	0.01	11 days
39139	Rosa Sliced Pepperoni 1/4-1/8ct	25	29387	Gratifica Pepperoni	8,797.4	12.2	11.2	Main Pepp	0.1%	0.01	11 days
38028	LUGI-PEPPERONI Sliced 14-15 CT 2/12.5# BAGS FONTE ARGENTO	25	29387	Gratifica Pepperoni	3,087.1	12.2	11.2	Main Pepp	0.0%	0.00	11 days
39089	ZORBAZ SLICED PEPPERONI 2/12.5# 14-16CT	25	29329 & 29319	Bulk Sliced Pepperoni	11,839.2	12.1	11.1	Main Pepp	0.1%	0.01	11 days
91148	BIG LOUS PIZZASLICED PEPPERONI 2/12.5# 14CT	25	29329 & 29319	Bulk Sliced Pepperoni	13,350.0	12.0	11.0	Main Pepp	0.1%	0.01	11 days
39000	Ciccone Sliced Pepperoni 4/5# 14ct	20	29387	Gratifica Pepperoni	1,817.5	12.0	11.0	Main Pepp	0.0%	0.00	11 days
39024	BELLISSIMO SLICED PEPPERONI 2/12.5#	25	29329 & 29319	Bulk Sliced Pepperoni	16,111.3	11.7	10.7	Main Pepp	0.2%	0.02	10 days
92230	BELLISSIMO SLICED PEPPERONI	10	29329 & 29319	Bulk Sliced Pepperoni	8,158.4	11.7	10.7	Main Pepp	0.1%	0.01	10 days
39049	MINEOPREMIUM SLICED PEPPERONI 13CT	25	29329 & 29319	Bulk Sliced Pepperoni	17,898.1	11.6	10.6	Main Pepp	0.2%	0.02	10 days
91858	CANAL FULTON PRIDE SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	12,135.8	11.3	10.4	Main Pepp	0.1%	0.01	10 days
2498	LIGURIA SLICED PEPPERONI 2/5# 10 COUNT	10	29329 & 29319	Gas Flushed Sliced Pepperoni	15,908.3	11.3	10.3	Main Pepp	0.2%	0.02	10 days
91917	CREMOSA SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	15,143.2	10.9	9.9	Main Pepp	0.2%	0.02	9 days
36047	CICCONI SLICED PEPPERONI 14-16 COUNT	25	29329 & 29319	Bulk Sliced Pepperoni	4,309.5	10.9	9.9	Main Pepp	0.0%	0.00	9 days
91979	DIMAR SLICED PEPPERONI	25	29329 & 29319	Bulk Sliced Pepperoni	4,396.9	10.0	9.0	Main Pepp	0.0%	0.00	9 days
	Total				10,200,182.6				100.1%	12.53	
	Total excl E&Ps				10,191,476.5				100.0%	12.53	

ProdNum	Description	TargetWt	Wip Code	Wip Desc	Sum of Netwt	Average of Days	Average of Days	Type	% Type	Calc days	Days Grap
38080	ROMA-PEPPERONI DELI STICKS MKD 3.5 DIAM 2PC	11	29340	Del Pepperoni Large Pepp	1,061.5	38.0	37.0	Lg Diameter	0.0%	0.00	37 days
34020	NELLIES PROVISIONS Sliced DEL PEPPERONI 4/4# SCT	16	29341	6X48 Pepperoni	791.9	36.0	35.0	Lg Diameter	0.0%	0.02	35 days
39080	ROMA-PEPPERONI DELI Sliced 6 CT 8MKD 2.75 DIAM 10 LB	10	29336	Sliced 6X48 Pepperoni	180.5	34.0	33.0	Lg Diameter	0.0%	0.00	33 days
91808	TUBBY'S Sliced Hard Salami 4/5#	20	29124	Salami 6X48 Gratifica BC	5,438.5	31.9	30.3	Lg Diameter	0.3%	0.10	30 days
34017	ULTIMO SLI LG DELI 6X48 4/4#	16	29341	6X48 Pepperoni	3,049.8	28.9	27.9	Lg Diameter	0.2%	0.05	27 days
34004	WALNUT CREEK FOODS Sliced 6X48 Del Pepperoni 4/5#	20	29338	Sliced 6X48 Pepperoni	6,826.7	26.0	25.0	Lg Diameter	0.4%	0.11	25 days
34004	SLICED DELI PEPPERONI 6 COUNT 4/4#	18	29338	Sliced 6X48 Pepperoni	6,784.4	25.8	24.6	Lg Diameter	0.4%	0.11	24 days
35040	MR. HEROS Sliced DELI PEPPERONI SCT 2/5#	10	29338	Sliced 6X48 Pepperoni	3,248.5	24.8	23.6	Lg Diameter	0.2%	0.05	23 days
60002	ROMA-SALAMI HRD STICKS PC	11	29278	Gratifica BC	2,374.3	24.7	23.7	Lg Diameter	0.1%	0.04	23 days
50011	NAPOLI HARD SALAMI 3PC	16	29278	Gratifica BC	5,591.0	24.1	23.1	Lg Diameter	0.4%	0.08	23 days
60001	HILLDALE FARM SHARD SALAMI 3PC	16	29278	Gratifica BC	6,714.0	24.1	23.1	Lg Diameter	0.4%	0.10	23 days
62053	GRATIFICA HARD SALAMI 3PC	10	29336	Gratifica BC	34.8	24.0	23.0	Lg Diameter	0.0%	0.00	23 days
59018	LIGURIA Sliced Dried Salami 2/5#	10	29124	6X48 Hard Salami	3,475.4	23.6	22.6	Lg Diameter	0.2%	0.05	22 days
53025	Cottage Inn Sliced Hard Salami 2/5#	10	29124	Sliced 6X48 Gratifica BC	3,809.7	23.5	22.5	Lg Diameter	0.2%	0.05	21 days
58009	DELI Sliced HARD SALAMI 4CT 4-# UNITS	16	29124	Sliced 6X48 Gratifica BC	6,636.0	22.5	21.4	Lg Diameter	0.2%	0.05	21 days
60016	BERKSHARD SALAMI 3PC	17	29278	Gratifica BC	4,191.5	22.4	21.4	Lg Diameter	0.3%	0.08	21 days
2879	LIGURIA Sliced DELI PEPPERONI 6 COUNT 4/5#	20	29338	Sliced 6X48 Pepperoni	1,047.1	22.4	21.4	Lg Diameter	0.1%	0.01	21 days
2878	SLICED DELI PEPPERONI 8 COUNT 4/4#	18	29338	Sliced 6X48 Pepperoni	3,939.1	22.0	21.0	Lg Diameter	0.2%	0.05	21 days
30056	ROMA-PEPPERONI DELI Sliced 8 CT 10 LB BAG	10	29338	Sliced 6X48 Pepperoni	503.2	21.9	20.9	Lg Diameter	0.0%	0.01	20 days
39002	ROMA Sliced HARD SALAMI 2/5# GF	10	29124	Sliced 6X48 Gratifica BC	180.0	20.0	19.0	Lg Diameter	0.0%	0.00	19 days
47801	ULTIMO SUPREMES Sliced GENOA SALAMI 4-# Units	18	29338	Sliced AC Genoa (6X48 Premix)	8,792.5	18.9	18.9	Lg Diameter	0.6%	0.10	18 days
34022	WALNUT CREEK FOODS Sliced 6X48 Del Pepperoni 4/4#	18	29338	Sliced 6X48 Pepperoni	7,138.8	18.4	18.4	Lg Diameter	0.4%	0.08	18 days
53010	FOX'S PIZZA DENSIFIED HARD SALAMI 2/5# GF	10	29336	6X48 Hard Salami	7,184.1	18.3	17.6	Lg Diameter	0.5%	0.08	17 days
40001	BERKS GENOA SALAMI 3 PIECES	17	29291	Gratifica AC Genoa	3,494.2	17.5	16.5	Lg Diameter	0.2%	0.04	16 days
2814	LIGURIA DELI Sliced GENOA SALAMI 4/4#	18	29290	Sliced AC Genoa (6X48 Premix)	8,894.5	17.2	16.2	Lg Diameter	0.6%	0.09	16 days
48011	LEONARDO'S GENOA SALAMI 3PC	17	29141	AC-AD Genoa Salami	9,057.7	17.2	16.2	Lg Diameter	0.4%	0.08	16 days
44023	SHERENE GENOA SALAMI 8 PC	35	29291	Gratifica AC Genoa	6,459.5	17.0	16.0	Lg Diameter	0.4%	0.07	15 days
46002	LIAG-SALAMI GENOA STICK 2 PC	11	29141	AC-AD Genoa Salami	8,025.9	16.9	15.9	Lg Diameter	0.5%	0.08	15 days
2842	LIGURIA Sliced GENOA SALAMI	10	29290	Sliced AC Genoa (6X48 Premix)	1,612.7	16.8	15.8	Lg Diameter	0.1%	0.02	15 days
63003	ROMA ITALIAN DRY SALAMI 2/5# Gas Flush Bags	10	29388	Italian Style Dried Salami	4,450.8	16.7	15.7	Lg Diameter	0.3%	0.04	15 days
47805	DELI Sliced GENOA SALAMI 4-# Units	18	29290	Sliced AC Genoa (6X48 Premix)	8,782.5	16.6	15.6	Lg Diameter	0.6%	0.09	15 days
91807	SAVONA AC GENOA SALAMI 3PC	17	29291	Gratifica AC Genoa	5,023.9	16.8	15.8	Lg Diameter	0.3%	0.05	15 days
2476	GRATIFICA AC GENOA SALAMI 3PC	18	29291	Gratifica AC Genoa	9,274.4	16.8	15.8	Lg Diameter	0.4%	0.08	15 days
35033	LIGURIA Italian Style Dried Salami 2/5#	10	29388	Italian Style Dried Salami	8,783.5	15.6	14.6	Lg Diameter	0.5%	0.08	14 days
91834	LIGURIA Diced AC GENOA 10#	10	29291	Gratifica AC Genoa	3,934.0	15.0	14.0	Lg Diameter	0.3%	0.04	14 days
91858	DIAMAR AC GENOA SALAMI 6PC	35	29291	Gratifica AC Genoa	367.5	15.0	14.0	Lg Diameter	0.6%	0.00	14 days
35046	PAPA MURPHY'S Italian Dried Salami	20	29386	Italian Style Dried Salami	6,793.1	11.9	10.9	Lg Diameter	0.4%	0.05	10 days
					1,666,338.6				100.0%	21.10	

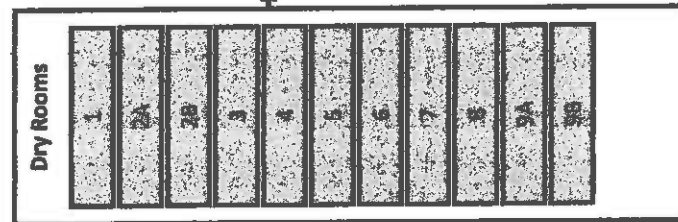
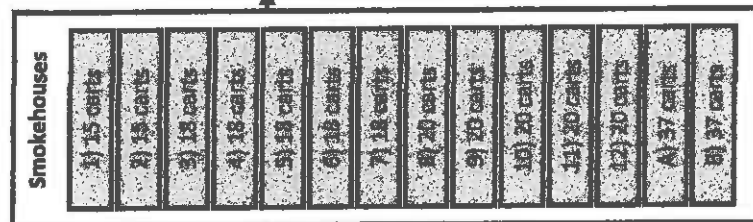
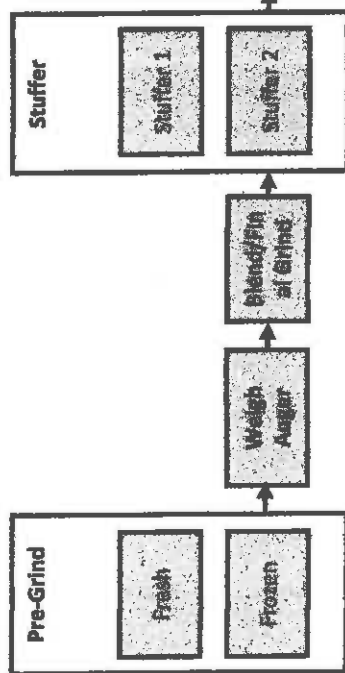
ProdNum	Description	Targetwt	Wip Code	Wip Desc	Sum of Netwt	Average of Days	Average of Days	Type	% Type	Cals days
38001	HILLANDELELI PEPPERONI 3PC	10	29330	Del Pepperoni Small Deli	1,082.1	29.0	28.0	Other Pepp	0.1%	0.03
38000	SCOTT PETERSEN DELI PEPPERONI 3PC	10	29330	Del Pepperoni Small Deli	5,334.6	25.4	24.4	Other Pepp	0.6%	0.14
2947	LIGURIA DELI PEPPERONI 3PC	20	29330	Del Pepperoni Small Deli	3,838.8	28.2	22.2	Other Pepp	0.4%	0.09
38020	BERKS Deli Pepperoni 3 Pieces	10	29330	Del Pepperoni Small Deli	2,801.1	29.1	22.1	Other Pepp	0.3%	0.07
38058	WALNUT CREEK FOODS Deli Small Deli	10	29330	Del Pepperoni Small Deli	28,144.0	22.5	21.6	Other Pepp	3.2%	0.70
38043	DELALLO DELI PEPPERONI 3 PIECES	10	29330	Del Pepperoni Small Deli	3,088.1	22.5	21.5	Other Pepp	0.4%	0.10
55235	DELI FRESH DELI PEPPERONI 3PC	10	29330	Del Pepperoni Small Deli	3,049.2	21.7	20.7	Other Pepp	0.3%	0.07
2511	LIGURIA DELI PEPPERONI 3PC	10	29330	Del Pepperoni Small Deli	31,228.3	21.2	20.2	Other Pepp	3.5%	0.70
38002	NAPOLI Deli Pepperoni 3 pc	10	29330	Del Pepperoni Small Deli	5,645.3	21.2	20.2	Other Pepp	0.6%	0.13
38059	ROMA-PEPPERONI DELI STICKS MKD 2.75 DIAM 2PC	7	29330	Del Pepperoni Small Deli	3,309.4	21.1	20.1	Other Pepp	0.4%	0.07
38045	LEONARDO'S DELI PEPPERONI 3PC	10	29330	Del Pepperoni Small Deli	543.3	19.0	18.0	Other Pepp	0.1%	0.01
38070	LIGURIA PEPPERONI COMBO FOR FURTHER PROCESS	1236	29330	FFP Special Spice	116,689.0	15.5	14.5	Other Pepp	12.9%	1.87
36062	ULTIMOSLICED SPICY PEPPERONI 2/12.5#	25	29381	Spicy Pep Coarse Grind	8,663.9	15.4	14.4	Other Pepp	1.0%	0.14
36014	Marino Link Pepperoni	10	29334	Bulk Link Pepperoni	150.0	15.0	14.0	Other Pepp	0.0%	0.00
1857	LIGURIA Link Pepperoni 16-5oz	5	29334	Bulk Link Pepperoni	4,025.7	14.7	13.7	Other Pepp	0.4%	0.08
10871	DELALLO Link Pepperoni 16-5oz	5	29334	Bulk Link Pepperoni	6,957.3	14.6	13.6	Other Pepp	0.5%	0.11
35034	SP CARA DONNA Sliced Pepperoni 2/5#	5	29334	Bulk Link Pepperoni	20,195.0	14.6	13.6	Other Pepp	2.2%	0.31
55245	DELI FRESH Link Pepperoni	10	29381	Spicy Pep Coarse Grind	1,808.1	14.4	13.4	Other Pepp	0.2%	0.02
36013	NAPOLI Link 2/5#	10	29334	Bulk Link Pepperoni	1,143.4	13.9	12.9	Other Pepp	0.1%	0.02
01844	ROMA Double Link Pepperoni	10	29334	Bulk Link Pepperoni	30,215.6	13.9	12.9	Other Pepp	3.4%	0.43
2645	LIGURIA Double Link Pepperoni	10	29334	Bulk Link Pepperoni	15,318.5	13.8	12.8	Other Pepp	1.7%	0.22
36004	GRATIFICA LINK PEPPERONI GAS FLUSH 2/5#	10	29334	Bulk Link Pepperoni	2,661.0	13.7	12.7	Other Pepp	0.3%	0.04
36070	PIZZA PROS Sliced Spicy Pepperoni 2/12.5#	25	29381	Spicy Pep Coarse Grind	61,059.4	13.4	12.4	Other Pepp	8.6%	0.84
2648	LIGURIA STICK PEPPERONI 10PC	10	29337	Dicarlo Special Sliced	9,682.6	13.3	12.3	Other Pepp	1.1%	0.13
36055	Dicarlo Sliced Pepperoni	25	29380	Spicy Pep Coarse Grind	7,433.8	13.0	12.0	Other Pepp	0.8%	0.10
38079	BELUSSIMOSpicy Pepperoni 2/12.5# 14ct	25	29381	Dicarlo Special Sliced	58,678.6	13.0	12.0	Other Pepp	6.6%	0.78
36074	LIGURIASliced Spicy Pep 2/12.5# 14ct	25	29381	Spicy Pep Coarse Grind	35,910.9	12.7	11.7	Other Pepp	4.0%	0.47
30057	ROMA-PEPPERONI Sliced 38MM CUP N CHAR 10LB	10	29384	Cup & Char Spicy Pepperoni 43	1,988.7	12.5	11.5	Other Pepp	0.2%	0.03
36180	Dicarlo Sliced Pepperoni	25	29380	Cup & Char Spicy Pepperoni 43	11,727.0	12.5	11.5	Other Pepp	1.5%	0.15
36037	WALNUT CREEK FOODS Sliced Pepperoni 2/5# GF	10	29331	Retall Pepperoni	28,630.0	12.5	11.5	Other Pepp	2.9%	0.34
36028	SUICING PEPPERONI COMBO FOR FURTHER PROCESS	1419	29347	15 X 54 Slicing Pepp	71,801.0	12.5	11.5	Other Pepp	7.9%	0.91
30064	SIR PIZZA ROSSO Sliced Pepperoni	10	29331	Retall Pepperoni	27,405.8	12.3	11.3	Other Pepp	3.0%	0.34
01996	CORA Link Pepperoni 2/5#	10	29334	Bulk Link Pepperoni	3,874.4	12.3	11.3	Other Pepp	0.4%	0.05
2548	LIGURIA SLICED PEPPERONI 4/5#	20	29331	Retall Pepperoni	12,182.8	12.1	11.1	Other Pepp	1.8%	0.15
30055	LIGURIA Cup and Char	10	29384	Cup & Char Spicy Pepperoni 43	7,125.0	12.1	11.1	Other Pepp	0.8%	0.09
39006	DetalloLink Pepperoni Band All	10	29334	Bulk Link Pepperoni	3,049.3	11.8	10.8	Other Pepp	0.3%	0.04
36120	Pontrelli 2/12.5# Cup and Char Sliced Pepperoni	25	29384	Cup & Char Spicy Pepperoni 43	7,771.8	11.7	10.7	Other Pepp	0.9%	0.09
36103	ROMA-PEPPERONI Sliced SPICY 14-18 CT 2/12.5 LB BAGS	25	29381	Spicy Pep Coarse Grind	2,474.1	11.6	10.6	Other Pepp	0.8%	0.03
35914	BELUSSIMO Sliced Beef Pepperoni 2/5# GF	10	29281	Beef Pepperoni	20,181.2	11.3	10.3	Other Pepp	2.2%	0.23
2510	LIGURIA SLICED BEEF PEPPERONI 2/5#	10	29281	Beef Pepperoni	32,295.7	11.2	10.2	Other Pepp	3.8%	0.37
36055	DELALLO STICK PEPPERONI 24/20 oz	30	29333	Special Sliced Pepperoni	2,851.2	10.7	9.7	Other Pepp	0.3%	0.03
36084	LIGURIA SPECIAL SLICED PEPPERONI	10	29335	Stick Pepperoni (301 Boxes)	24,527.4	10.5	9.5	Other Pepp	2.7%	0.28
51249	DELALLO Sliced Pepperoni 10/20oz	13	29333	All Port Pepperoni	89,258.1	10.4	9.4	Other Pepp	8.6%	0.83
36145	PETER PIPERS Sliced PORK PEPPERONI	25	29379	Special Sliced Pepperoni	24,306.8	10.2	9.2	Other Pepp	2.7%	0.26
2487	LIGURIA SPECIAL SLICED PEPPERONI 16CT	25	29335	Special Sliced Pepperoni	7,523.7	10.0	9.0	Other Pepp	0.6%	0.06
36004	PATS PIZZA 2/12.5# SLICED PEPPERONI 16CT	25	29335	Special Sliced Pepperoni	1,526.2	10.0	9.0	Other Pepp	0.2%	0.02
36038	DAIRY FRESH Sliced Pepperoni 4/5#	20	29335	Cup n Char Sliced Pepperoni	22,290.5	9.8	8.8	Other Pepp	2.5%	0.22
30046	LIGURIA Curf & Crisp Sliced Pepperoni	10	29377	Beef Pepperoni	23,274.0	9.8	8.8	Other Pepp	2.8%	0.23
38011	ROMA Sliced Beef Pepperoni 2/10# 13ct	20	29281		800,878.4				100.0%	12.55
35058	BELUSSIMOSliced Pepperoni 4/5# units 14ct	20	#N/A	#N/A	34,280.9	13.0	12.0	#N/A	58.7%	10.72
36084	RESELOS Sliced PEPPERONI	25	#N/A	#N/A	2,350.0	12.8	11.6	#N/A	8.1%	0.71
35920	PIZZA METRYSTICK PEPPERONI	25	#N/A	#N/A	1,600.0	30.6	28.8	#N/A	4.2%	1.24
					38,240.9				100.0%	12.87

Info + data obtained  
from Liguria + consultant  
during plant visit.

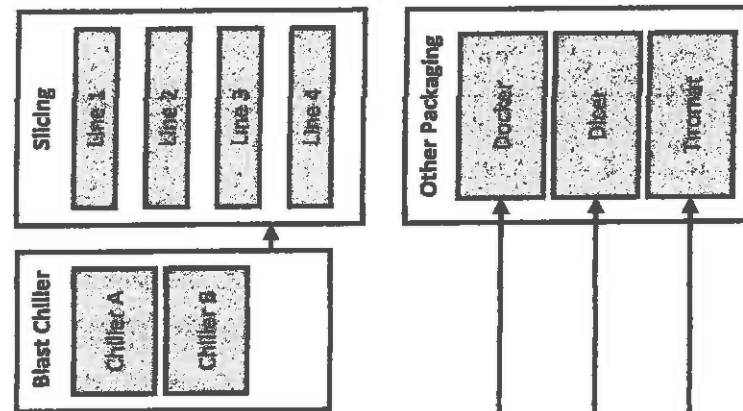


# Plant production split into two distinct processes

## Processing



## Packaging



Processing includes all activities from formulation up to loading of dry rooms

Packaging includes all activities from unloading dry rooms to shipping of finished goods



# Top 40 SKUs account for 71% finished goods volume

Item	Volume Lbs	Avg Days Prod	Total Slices	% total
LIGURIASLICED PEPPERONI	1,311,932.7	13.2	272,881,997.4	10.3%
Great Kitchens Pepperoni For Further Processing	1,095,017.0	14.1		8.6%
ROMA SLICED PEPPERONI 2/12.5#	883,415.2	12.9	197,985,000.3	6.9%
MAMA ISABELLASLICED Pepperoni 2/5#	481,827.8	15.2	100,220,178.2	3.8%
LUIGI-PEPPERONI SLCD14 CT 2/10 LB BAGS FONTE ARGENTO	476,131.5	13.9	114,271,569.6	3.7%
VITALESLICED Pepperoni 2/10# (4600019)	344,775.4	13.0	66,196,876.8	2.7%
PETER PIPER SLICED PEPPERONI	284,121.7	13.9	81,827,046.7	2.2%
Pepperoni Ends & Pieces For Further Processing	235,441.0	14.1		1.9%
MARINOSLICED Pepperoni 2/10# (4600006)	215,182.6	13.0	41,315,053.4	1.7%
LIGURIA SLICED PEPPERONI	215,149.6	12.7	46,014,430.9	1.7%
FONATANISLICED Pepperoni 25# 14ct	198,298.9	12.4	44,418,953.6	1.6%
LISANTISLICED PEPPERONI	181,324.2	12.1	31,913,059.2	1.4%
Firehouse SubsSliced Genoa Salami 4/3#	177,099.7	17.1	11,334,379.5	1.4%
LIGURIASLICED Pepperoni 2/12.5# units	175,535.8	12.7	40,873,681.0	1.4%
ROMA SLICED PEPPERONI	168,490.1	13.3	37,965,789.1	1.3%
FOXES PIZZA DENSICED Pepperoni 2/12.5#	153,438.4	13.1	34,370,199.4	1.2%
LIGURIAIRREGULAR SLICED PEPPERONI	148,613.6	19.4		1.2%
FIREHOUSE SUBSSLICED Deli Pepperoni 4/3#	147,390.3	34.6	9,432,979.8	1.2%
CORA SLICED PEPPERONI	137,013.8	12.1	28,498,864.2	1.1%
ULTIMO SUPREMESLICED PEPPERONI 2/12.5#	136,281.1	12.5	32,707,466.4	1.1%
TESOROSLICED Pepperoni 2/10#	128,121.0	13.4	28,738,588.2	1.0%
ULTIMO SLICED PEPPERONI 2/12.5# UNITS	126,494.3	15.0	29,241,794.4	1.0%
LIGURIA SLICED PEPPERONI 2/5#	118,329.8	14.0	24,612,592.2	0.9%
LIGURIA PEPPERONI COMBO FOR FURTHER PROCESS	116,669.0	15.5		0.9%
CARA DONNASLICED Pepperoni 2/5#	115,980.6	13.0	24,126,038.6	0.9%
GREAT KITCHENSSLICED PEPPERONI 25# 14CT	108,639.8	15.4	28,073,547.2	0.9%
BELLISSIMOSLICED pepperoni 2/5# G F	104,713.3	13.5	20,104,963.2	0.8%
NAPOLI SLICED PEPPERONI 10 COUNT	104,238.5	12.3	18,678,161.6	0.8%
LUIGISLICED PEPPERONI 2/12.5#	100,241.6	13.3	20,850,257.0	0.8%
SCOTT PETERSEN HARD SALAMI 3 PIECES	98,851.2	22.7		0.8%
ROMAGENOVA SALAMI 2PC	90,804.8	17.2		0.7%
PETER PIPERSLICED PORK PEPPERONI	89,258.1	10.4	25,706,321.3	0.7%
AUNTIE ANNESSLICED Pepperoni 4/5#	84,346.9	14.6	20,243,258.4	0.7%
LUIGI-PEPPERONI SLCD14 CT 10 LB BAG FONTE ARGENTO	83,658.8	14.9	18,739,571.2	0.7%
LUIGI-PEPPERONI SLCD14 CT 2/10 LB BAGS	80,690.0	13.7	18,074,562.2	0.6%
LIGURIA QTRD & SLICED PEPPWhole Stick Pepp Quartered	79,845.5	12.6		0.6%
ULTIMO SUPREMESLICED Pepperoni 14ct 4/5#	77,824.2	13.7	17,387,825.3	0.6%
CEDAR BROOK SLICED PEPPERONI	76,773.1	13.2	15,968,815.2	0.6%
PEPINELLASLICED PEPPERONI 13CT	73,096.6	13.3	16,373,636.2	0.6%
SLICING PEPPERONI COMBO FOR FURTHER PROCESS	71,601.0	12.5		0.6%
All other (221 items - average 0.1% of total volume)	3,628,470.6		512,007,530.4	28.5%
Grand Total	12,725,739.1	15.0	2,027,055,988.0	100%

Source: TraceIT production system





## Next steps

- Dry rooms
  - Pull out and slice what is ready when it is ready
  - Dry room engineering analysis – what can be done to use dry rooms better? (Airflow Sciences, Stan S., others?) (J)
  - Establish customer quality M:P standards for release by product – start with main pepperoni products
  - Work with QC to improve M:P sampling to ensure best dry room use – ensure target dates for different dry rooms make sense (test one day later?), etc.
- Smokehouses – aim for 14 cycles every day (G/K/C)
  - Eliminate mechanical downtime – stuffing, smokehouse, formulation, raw materials availability
  - Reduce slow days – East line 2<sup>nd</sup> shift, 3<sup>rd</sup> stuffer, etc.
- Slicing/Packing (G/K)
  - Drive PM shift productivity – 21% lower than AM shift
  - Measure and track actual productivity standards by line by product (TracellT)
  - Understand 12% slicing volume not allocated to slicing line
  - Ensure consistency and speed of machine operations
- Reporting (P)
  - Labor productivity – 2 reports (formulation/process and packaging)
  - Yield productivity
  - Measure and track actual rework and scrap produced daily
  - Eliminate unnecessary reporting
  - Use Just Food better/more
- Scheduling (in process) (J)
- Process definitions (G/K/Jim)
  - Michelle McClusky (former Tyson/Sara Lee QA professional to support process documentation)

# Prioritization is key to ensuring building and sustaining momentum and delivering early wins



- Critical to prioritize initiatives and not do too much at once
  - Important to do a couple things right and quickly rather than everything at once poorly and slowly
  - Prioritizing (instead of biting off too much) ensures can show progress sooner, build momentum/ enthusiasm (as opposed to skepticism and fatigue), and begin to deliver against operating results sooner
    - Most initiatives require investing a certain amount of work before reaching a tipping point where any measurable results will be seen
    - Prioritizing fewer tasks ensures that we reach that point sooner for fewer tasks (and therefore show some measureable improvement) rather than parallel processing many tasks at once and waiting until later for them to show potentially larger results all at once
- Suggested initial prioritization:
  - Gary/Keith focus on optimizing Slicing/Packing
  - Jehan focus on improving Dry Rooms
  - Paul focus on reporting
- For other initiatives, start tracking data now to establish baseline and get used to tracking actual results
  - Orients team to normal variability
  - Allows the team to use factual history once you do start to optimize area
- Jehan to consider which area(s) for process documentation to focus - TBD
- Scheduling person to start in a few weeks



## Detail -- Main Pepp (1 of 2)

ProdNum	Description	Target	WFO Code	WFO Desc	Sum of Ndw	Total Days	Dry Room Days	Type	% Type
2651	LIGURASLICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	1,311,932.7	13.2	12.2	Main Pepp	12.9%
38081	Great Kitchens Pepperoni for Further Processing	1378 26345	1378 26345	Great Kitchens	1,089,017.0	14.1	13.1	Main Pepp	10.7%
38089	ROMA SLICED PEPPERONI 212.5#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	883,415.2	12.8	11.9	Main Pepp	8.7%
38111	LUGH-PEPPERONI SLOD14 CT 2710 LB BAGS FONTE ARGENTO	10 28354	10 28354	Coarse Chd Pepperoni	481,827.8	15.2	14.2	Main Pepp	4.7%
38082	VITALIPEPPERONI SLOD14 CT 2710 LB BAGS FONTE ARGENTO	20 28387	20 28387	Gratified Pepperoni	478,131.5	13.8	12.8	Main Pepp	4.7%
38140	PETER PETER SLICED PEPPERONI	25 28387	25 28387	Gratified Pepperoni	344,775.4	13.0	12.0	Main Pepp	3.4%
38086	Pepperoni Ends & Pieces for Further Processing	1298 28329 & 28319	1298 28329 & 28319	Bulk Sliced Pepperoni	284,121.7	13.8	12.8	Main Pepp	2.8%
38083	MARINOSLICED PEPPERONI 210# (4000008)	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	235,441.0	14.1	13.1	Main Pepp	2.3%
38075	FONTANISLICED PEPPERONI 210# (4000008)	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	215,182.8	13.0	12.0	Main Pepp	2.1%
2583	LIGURIA SLICED PEPPERONI	10 28354	10 28354	Bulk Sliced Pepperoni	199,268.9	12.4	11.4	Main Pepp	1.8%
38067	LIGURASLICED PEPPERONI	25 28387	25 28387	Gratified Pepperoni	191,090.8	12.1	11.1	Main Pepp	1.8%
91878	ROMA SLICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	181,324.2	12.1	11.1	Main Pepp	1.7%
38082	FOX8 PIZZA DENSLICED PEPPERONI 212.5#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	169,480.1	13.1	12.1	Main Pepp	1.5%
38043	LIGURIAIRREGULAR SLICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	153,438.4	13.1	12.1	Main Pepp	1.5%
91876	CORA SLICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	148,613.8	12.4	11.4	Main Pepp	1.3%
38021	ULTIMO SUPREMESLICED PEPPERONI 212.5#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	137,013.8	12.1	11.1	Main Pepp	1.3%
38071	LIGURASLICED PEPPERONI 212.5#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	130,281.1	12.5	11.5	Main Pepp	1.3%
38107	TESOROSLICED PEPPERONI 210#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	128,683.7	12.4	11.4	Main Pepp	1.2%
91864	LIGURIA SLICED PEPPERONI 210#	20 28387	20 28387	Gratified Pepperoni	128,683.7	12.4	11.4	Main Pepp	1.2%
25505	CARA DONNASLICED PEPPERONI 210#	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	118,320.8	13.3	12.3	Main Pepp	1.2%
38333	GREAT KITCHENS SLICED PEPPERONI 25# 14CT	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	113,890.8	14.0	13.0	Main Pepp	1.1%
38088	RELISSIMOSLICED PEPPERONI 25# G F	25 28385	25 28385	Great Kitchens	105,535.8	13.5	12.5	Main Pepp	1.1%
92087	NAPOLI SLICED PEPPERONI 10 COUNT	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	104,713.3	13.5	12.5	Main Pepp	1.0%
38050	ULTIMO SLICED PEPPERONI 212.5# UNITS	25 28384	25 28384	Bulk Sliced Pepperoni	104,238.9	12.3	11.3	Main Pepp	1.0%
38046	LIGURASLICED PEPPERONI 45#	25 28354	25 28354	Coarse Chd Pepperoni	103,226.9	15.1	14.1	Main Pepp	1.0%
38042	ALANTE ANNESLICED PEPPERONI 45#	25 28354	25 28354	Coarse Chd Pepperoni	100,241.8	14.8	13.8	Main Pepp	1.0%
38081	LUGH-PEPPERONI SLOD14 CT 10 LB BAG FONTE ARGENTO	10 28387	10 28387	Gratified Pepperoni	83,658.8	14.9	13.9	Main Pepp	0.8%
38081	LUGH-PEPPERONI SLOD14 CT 2710 LB BAGS	25 28329 & 28319	25 28329 & 28319	Coarse Chd Pepperoni	80,080.0	13.7	12.7	Main Pepp	0.8%
38081	LUGH-PEPPERONI SLOD14 CT 2710 LB BAGS	25 28329 & 28319	25 28329 & 28319	Coarse Chd Pepperoni	79,846.5	12.8	11.8	Main Pepp	0.8%
91897	CEDAR BROOK SLICED PEPPERONI	20 28329 & 28319	20 28329 & 28319	Gas Flushed Sliced Pepperoni	77,824.2	13.7	12.7	Main Pepp	0.8%
38041	PEPINNASLICED PEPPERONI 19CT	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	76,773.1	13.2	12.2	Main Pepp	0.7%
38028	FONTANISLICED PEPPERONI 212.5#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	73,086.8	13.3	12.3	Main Pepp	0.7%
92002	SAVONA SLICED PEPPERONI 45# UNITS	20 28329 & 28319	20 28329 & 28319	Gas Flushed Sliced Pepperoni	68,778.7	12.1	11.1	Main Pepp	0.7%
38086	BARI FOODS SLICED PEPPERONI	20 28329 & 28319	20 28329 & 28319	Gas Flushed Sliced Pepperoni	66,927.2	13.1	12.1	Main Pepp	0.7%
92128	LIGURIA SLICED PEPPERONI 1/4 Inch	10 28319	10 28319	Bulk Sliced Pepperoni	66,427.8	13.1	12.1	Main Pepp	0.7%
38082	Tesoro Sliced Pepperoni	10 28329 & 28319	10 28329 & 28319	Bulk Sliced Pepperoni	55,180.7	12.8	11.8	Main Pepp	0.6%
38047	SLICED PEPPERONI for Further Processing	10 28387	10 28387	Gratified Pepperoni	55,049.3	12.9	11.9	Main Pepp	0.6%
38072	SALVATORESICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Gas Flushed Sliced Pepperoni	55,183.6	13.1	12.1	Main Pepp	0.6%
38073	ULTIMO SUPREMESLICED PEPPERONI 15 CT 25#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	52,080.0	13.4	12.4	Main Pepp	0.6%
91914	JERACI BRANDSLICED PEPPERONI 45#	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	50,804.9	12.3	11.3	Main Pepp	0.6%
38028	LUGH-PEPPERONI SLOD16CT 212.5# BAGS FONTE ARGENTO	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	48,811.9	14.7	13.7	Main Pepp	0.5%
38150	Gratified Sliced Pepperoni 45#	25 28387	25 28387	Gratified Pepperoni	48,552.1	13.4	12.4	Main Pepp	0.5%
38115	Gratified Sliced Pepperoni 120# 18 ct	20 28387	20 28387	Gratified Pepperoni	48,552.1	13.7	12.7	Main Pepp	0.5%
92223	FRESH ESSENTIALS SLICED PEPPERONI 212.5#	25 28387	25 28387	Gratified Pepperoni	42,374.0	12.0	11.0	Main Pepp	0.4%
38082	PEPPERONI ENDS & PIECES	25 28319, 28331, 28319	25 28319, 28331, 28319	Bulk Sliced Pepperoni	40,109.8	14.9	13.9	Main Pepp	0.4%
38087	CUCINA BOVASSLICED PEPPERONI 45# GF	25 28319, 28331, 28319	25 28319, 28331, 28319	Bulk Sliced Pepperoni	40,109.8	13.2	12.2	Main Pepp	0.4%
38048	SLICED PEPPERONI 45# GAS FLUSH	25 28329 & 28319	25 28329 & 28319	Gas Flushed Sliced Pepperoni	37,877.1	15.8	14.8	Main Pepp	0.4%
92040	DELI FRESH SLICED PEPPERONI	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	37,540.1	13.5	12.5	Main Pepp	0.4%
91870	IL MERCANTOSLICED PEPPERONI	25 28387	25 28387	Gratified Pepperoni	34,148.4	12.8	11.8	Main Pepp	0.3%
38124	Goliath Sliced Pepperoni 210#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	34,115.7	13.0	12.0	Main Pepp	0.3%
38010	BELLISSIMO SLICED PEPPERONI 15-17 COUNT	20 28387	20 28387	Gratified Pepperoni	35,948.2	11.4	10.4	Main Pepp	0.3%
38088	STRAW HAT PIZZASLICED PEPPERONI 4# 25#	10 28329 & 28319	10 28329 & 28319	Bulk Sliced Pepperoni	31,513.4	14.4	13.4	Main Pepp	0.3%
38089	BY-GEORGE SLICED PEPPERONI 12 COUNT	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	30,877.6	13.5	12.5	Main Pepp	0.3%
38040	BAN ANTONIOSLICED PEPPERONI	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	30,604.8	13.0	12.0	Main Pepp	0.3%
91235	Tenuto Sliced Pepperoni	10 28329 & 28319	10 28329 & 28319	Bulk Sliced Pepperoni	30,043.5	14.1	13.1	Main Pepp	0.3%
92140	GRECO SLICED PEPPERONI 25#	25 28387	25 28387	Gratified Pepperoni	28,737.8	12.9	11.9	Main Pepp	0.3%
38035	SHERENE SLICED PEPPERONI 210#	25 28329 & 28319	25 28329 & 28319	Bulk Sliced Pepperoni	28,382.9	12.0	11.0	Main Pepp	0.3%
38051	ULTIMO SLICED PEPPERONI 212.5# UNITS	25 28354	25 28354	Coarse Chd Pepperoni	24,364.4	13.1	12.1	Main Pepp	0.2%
38046	SLICED PEPPERONI (IRREGULAR)	25 28329 & 28319	25 28329 & 28319	Gas Flushed Sliced Pepperoni	23,267.4	13.1	12.1	Main Pepp	0.2%
91850	LIGURIA SLICED PEPPERONI	25 28387	25 28387	Bulk Sliced Pepperoni	21,928.0	14.6	13.6	Main Pepp	0.2%
38002	HILLANDALE FARMS SLICED PEPPERONI 25#	25 28329 & 28319	25 28329 & 28319	Gratified Pepperoni	21,178.3	12.8	11.8	Main Pepp	0.2%
38002	HILLANDALE FARMS SLICED PEPPERONI 25#	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	20,668.4	13.8	12.8	Main Pepp	0.2%
38002	HILLANDALE FARMS SLICED PEPPERONI 25#	10 28329 & 28319	10 28329 & 28319	Gas Flushed Sliced Pepperoni	20,331.3	14.9	13.9	Main Pepp	0.2%





Case 3:14-cv-03041-MWB-CJW Document 135-25 Filed 03/10/17 Page 41 of 48

17 Page 41 of 48  
SEAVEY000040

# Detail – Other Pepp



ProdNum	Description	Targetwt	Wip Code	Wip Desc	Sum of Netwt	Average of Days f	Average of Days f Type	% Type
38070	LIGURIA PEPPERONI COMBO FOR FURTHER PROCESS	1236	25391	Wip Desc	116,689.0	15.5	14.5	12.9%
38145	PETER PIPERUSLICED PORK PEPPERONI	25	25378	FFP Special Spice	86,256.1	10.4	9.4	9.9%
38028	SLICING PEPPERONI COMBO FOR FURTHER PROCESS	1419	25347	All Pork Pepperoni	71,601.0	12.5	11.5	7.9%
38070	PIZZA PROSLICED Spicy Pepperoni 2/12.5#	25	25361	Spicy Pep Coarse Grind	61,059.4	13.4	12.4	6.8%
38079	BELLISSIMOSpicy Pepperoni 2/12.5# 14ct	25	25361	Spicy Pep Coarse Grind	58,570.8	13.0	12.0	6.5%
38074	LIGURIASLICED Spicy Pepp 2/12.5# 14ct	25	25361	Spicy Pep Coarse Grind	35,910.9	12.7	11.7	4.0%
38065	DELALLO STICK PEPPERONI 24/20 oz	30	25333	Stick Pepperoni (301 Boxes)	32,285.7	11.2	10.2	3.8%
2511	LIGURIA DELI PEPPERONI 3PC	10	25339	Del Pepperoni Small Deli	31,228.3	21.2	20.2	3.5%
81944	ROMA Double Link Pepperoni	10	25334	Bulk Link Pepperoni	30,215.6	13.9	12.8	3.4%
38058	WALNUT CREEK FOODSPice Small Deli	10	25339	Del Pepperoni Small Deli	29,144.0	22.6	21.6	3.2%
30054	SIR PIZZA ROSSODiced Pepperoni	10	25331	Retail Pepperoni	27,405.6	12.3	11.3	3.0%
35037	WALNUT CREEK FOODSLICED Pepperoni 2/5# GF	13	25331	Retail Pepperoni	26,530.0	12.5	11.5	2.8%
51249	DELALLOSLICK Pepperoni 10/20oz	10	25333	Stick Pepperoni (301 Boxes)	24,527.4	10.5	9.5	2.7%
2487	LIGURIA SPECIAL SLICED PEPPERONI 16CT	25	25335	Special Sliced Pepperoni	24,506.6	10.2	9.2	2.7%
35911	ROMASliced Beef Pepperoni 2/10# 13ct	20	25281	Beef Pepperoni	23,274.0	9.8	8.8	2.6%
30046	LIGURIACurli & Crisp Sliced Pepperoni	10	25281	Cup n Char Sliced Pepperoni	22,280.5	9.9	8.9	2.6%
35034	SP CARA DONNASLICED Pepperoni 2/5#	10	25281	Beef Pepperoni	20,185.0	14.6	13.6	2.2%
2510	LIGURIASLICED BEEF PEPPERONI 2/5#	10	25377	Beef Pepperoni	20,181.2	11.3	10.3	2.2%
2549	LIGURIA Double Link Pepperoni	10	25334	Bulk Link Pepperoni	16,316.5	13.8	12.8	1.7%
38160	DI CARAS Sliced Pepperoni	20	25334	Retail Pepperoni	12,162.6	12.1	11.1	1.3%
2548	LIGURIA STICK PEPPERONI 10PC	25	25331	Stick Pepperoni	11,727.0	12.5	11.5	1.3%
38052	ULTIMOSLICED SPICY PEPPERONI 2/12.5#	18	25337	15 X 32 Stick Pepperoni	9,582.5	13.3	12.3	1.1%
38120	Pantelli 2/12.5#Cup and Char Sliced Pepperoni	25	25361	Spicy Pep Coarse Grind	8,963.9	15.4	14.4	1.0%
38004	PAT8 PIZZA 2/12.5#SLICED PEPPERONI 16CT	25	25364	Cup & Char Spicy Pepperoni 43A	7,771.6	11.7	10.7	0.8%
38055	DI CARAS Sliced Pepperoni	25	25350	Special Sliced Pepperoni	7,523.7	10.0	9.0	0.8%
30065	LIGURIA Cup and Char	10	25384	Delio Special Sliced	7,433.8	13.0	12.0	0.8%
10671	DELALLO Link Pepperoni 16-5oz	5	25334	Bulk Link Pepperoni	7,125.0	12.1	11.1	0.8%
35914	BELLISSIMO Sliced Beef Pepperoni 2/5# GF	10	25281	Beef Pepperoni	6,957.3	14.6	13.6	0.8%
38002	NAPOLI Deli Pepperoni 3 pc	10	25338	Del Pepperoni Small Deli	5,845.3	21.2	20.2	0.7%
38050	SCOTT PETERSEN DELI PEPPERONI 3PC	10	25339	Del Pepperoni Small Deli	5,334.6	26.4	24.4	0.6%
1857	LIGURIA Link Pepperoni 16-5oz	5	25334	Bulk Link Pepperoni	4,025.7	14.7	13.7	0.4%
38043	DELALLO DELI PEPPERONI 3 PIECES	10	25339	Del Pepperoni Small Deli	3,988.1	22.5	21.5	0.4%
81988	CORA Link Pepperoni 2/5#	10	25334	Bulk Link Pepperoni	3,874.4	12.3	11.3	0.4%
2547	LIGURIA DELI PEPPERONI 6 PIECES	20	25339	Del Pepperoni Small Deli	3,839.6	23.2	22.2	0.4%
38059	ROMA-PEPPERONI DELI STICKSMKD 2.75 DIAM 2PC	7	25339	Bulk Link Pepperoni	3,309.4	21.1	20.1	0.4%
38009	DelioLink Pepperoni Band AI	10	25334	Del Pepperoni Small Deli	3,043.2	11.8	10.8	0.3%
55235	DELI FRESHDELI PEPPERONI 3PC	10	25339	Del Pepperoni Small Deli	2,901.1	23.1	22.1	0.3%
38020	BERKS Deli Pepperoni 3 Pieces	10	25334	Bulk Link Pepperoni	2,851.2	10.7	9.7	0.3%
30064	GRATIFICA LINK PEPPERONI GAS FLUSH 2/5#	10	25335	Special Sliced Pepperoni	2,561.0	13.7	12.7	0.3%
38103	ROMA-PEPPERONI SlicedSPICY 14-16 CT 2/12.5 LB BAGS	25	25361	Spicy Pep Coarse Grind	2,474.1	11.6	10.6	0.3%
55245	DELI FRESH Link Pepperoni	10	25364	Cup & Char Spicy Pepperoni 43A	1,985.7	12.6	11.6	0.2%
35038	DAIRY FRESHSLICED Pepperoni 4/5#	20	25335	Bulk Link Pepperoni	1,608.1	14.4	13.4	0.2%
38013	NAPOLLINK 2/5#	10	25334	Special Sliced Pepperoni	1,526.2	10.0	9.0	0.2%
38001	HILLANDELI PEPPERONI 3PC	10	25339	Bulk Link Pepperoni	1,143.4	13.9	12.9	0.1%
38045	LEONARDOS DELI PEPPERONI 3PC	10	25339	Del Pepperoni Small Deli	1,062.1	29.0	28.0	0.1%
38014	Marino Link Pepperoni	10	25334	Del Pepperoni Small Deli	643.3	19.0	18.0	0.1%
				Bulk Link Pepperoni	150.0	15.0	14.0	0.0%
					900,976.4			100.0%



# Detail – Large Diameter (1 of 2)

ProdNum	Description	TargetWt	Wtp Code	Wtp Desc	Sum of Netwt	Average of Days (Average of Days / Type	% Type
47813	Firehouse Subs Sliced Genoa Salami 4/3#	12 29260		Sliced AC Genoa (6X48 Premium	177,099.7	17.1	16.1 Lg Diameter
34026	FIREHOUSE SUBS Sliced Deli Pepperoni 4/3#	12 29386		6X48 Great Kitchens	147,950.3	34.6	33.6 Lg Diameter
2848	SCOTT PETERSEN Hard Pepperoni 3 Pieces	16 29278		Gratifica BC	98,651.2	22.7	21.7 Lg Diameter
48010	ROMAGENOA SALAMI 2PC	11 29141		AC-AD Genoa Salami	90,804.8	17.2	16.2 Lg Diameter
2554	Sliced Deli Pepperoni 5 COUNT 4/4#	16 29338		Sliced 4X48 Pepperoni	50,248.5	21.6	20.6 Lg Diameter
44020	ASSOLUTI GENOA SALAMI 2 Pieces	11 29291		Gratifica AC Genoa	46,338.9	19.0	18.0 Lg Diameter
92101	NAPOLI GENOA SALAMI 3PC	17 29291		Gratifica AC Genoa	44,823.5	17.8	16.8 Lg Diameter
2555	Sliced Deli Pepperoni 4/5# 5 COUNT	20 29338		Sliced 4X48 Pepperoni	39,823.5	27.1	26.1 Lg Diameter
47808	MR. HEROSLICED GENOA SALAMI	10 29280		Sliced AC Genoa (6X48 Premium	33,509.9	20.0	19.0 Lg Diameter
92238	BELLISSIMO GENOA SALAMI 3PC	17 29141		Gratifica AC Genoa	32,766.9	18.9	17.9 Lg Diameter
44028	H-E-B GENOA SALAMI 6-1/2 Pieces	17 29291		Gratifica AC Genoa	30,836.0	18.1	17.1 Lg Diameter
38048	H-E-B DELI PEPPERONI 4-1/2 Pieces	11 29291		Gratifica AC Genoa	29,455.1	30.2	29.2 Lg Diameter
50035	FAIRMONT FARM Hard Salami 6pc	11 29291		Gratifica BC	29,300.0	21.3	20.3 Lg Diameter
44030	ROMA-SALAMI GENOA STICK 2 PC	34 29278		Gratifica AC Genoa	28,528.2	18.0	17.0 Lg Diameter
2488	LIGURIA SLICED HARD SALAMI 4/4# UNITS	16 29124		Sliced 6X48 Gratifica BC	28,138.6	21.4	20.4 Lg Diameter
2658	LIGURIA LARGE DELI PEPPERONI 3 PC	16 29340		Del Pepperoni Large Pepp	27,274.8	30.4	29.4 Lg Diameter
50020	BELLISSIMO Sliced Hard Salami 2/4# units	8 29124		Sliced 6X48 Gratifica BC	26,769.2	23.0	22.0 Lg Diameter
34025	BELLISSIMO Sliced Deli Pepperoni 2/5#	10 29338		Sliced 4X48 Pepperoni	26,288.7	24.5	23.5 Lg Diameter
91921	CORA AC GENOA SALAMI 3 Pieces	17 29291		Gratifica AC Genoa	21,368.0	18.4	17.4 Lg Diameter
90003	GOURMET HARD SALAMI 6 PC	32 29133		Belmelester	21,324.2	22.5	21.5 Lg Diameter
34001	LIGURIA SLICED LARGE DELI PEPPERONI 4 COUNT 4-4#	16 29341		6X48 Pepperoni	21,115.8	30.6	29.6 Lg Diameter
2602	AQUILA D ORO GENOA SALAMI 3PC	17 29141		AC-AD Genoa Salami	18,328.8	16.3	15.3 Lg Diameter
50027	PEPPINELLA HARD SALAMI 3PC	16 29278		Gratifica BC	16,726.9	22.8	21.8 Lg Diameter
59000	PICK OF THE PRAIRIES Sliced HARD SALAMI 4/5#	20 29124		Sliced 6X48 Gratifica BC	18,372.5	28.1	27.1 Lg Diameter
2628	LIGURIA HARD SALAMI 3 Pieces	17 29291		Gratifica BC	16,033.6	24.1	23.1 Lg Diameter
44017	PEPPINELLA GENOA SALAMI 3PC	16 29278		6X48 Pepperoni	17,766.7	17.1	16.1 Lg Diameter
34002	LIGURIA SLICED LARGE DELI PEPPERONI 4 COUNT 4-5#	20 29341		Gratifica AC Genoa	17,667.4	30.1	29.1 Lg Diameter
2604	CORA HARD SALAMI 3PC	16 29278		Gratifica BC	16,072.4	24.3	23.3 Lg Diameter
44035	SAN ANTONIO GENOA SALAMI 3pc	17 29291		Gratifica AC Genoa	14,041.0	15.9	14.9 Lg Diameter
92222	CHEFS ESSENTIAL GENOA SALAMI 3PC	1522 29278		Gratifica BC	13,860.0	23.1	22.1 Lg Diameter
53023	HARD SALAMI For Further Process	16 29278		Sliced 6X48 Gratifica BC	13,263.3	28.1	27.1 Lg Diameter
2480	SLICED HARD SALAMI 4/5# UNITS	12 29141		Gratifica BC	13,131.1	22.7	21.7 Lg Diameter
90008	HUMBOLDT HARD SALAMI 3PC	10 29338		AC-AD Genoa Salami	12,866.9	16.9	15.9 Lg Diameter
48012	VITALE GENOA SALAMI 2pc	10 29280		4X4 Spicy Deli Pepperoni	12,568.3	27.1	26.1 Lg Diameter
34023	LIGURIA Spicy sliced Deli pepperoni 3" 4ct	10 29383		Sliced AC Genoa (6X48 Premium	11,919.8	22.0	21.0 Lg Diameter
47819	BELLISSIMO Sliced Genoa Salami 2/5# units	10 29338		4X48 Hard Salami	11,912.3	20.1	19.1 Lg Diameter
53030	LIGURIA Sliced Dried Salami 2/5# units	10 29338		Sliced AC Genoa (6X48 Premium	11,834.0	17.0	16.0 Lg Diameter
44024	GENOA SALAMI 6X48 COMBO FOR FURTHER PROCESS	1208 29280		Sliced 6X48 Gratifica BC	11,723.3	24.2	23.2 Lg Diameter
53022	TUBBYSS Sliced Hard Salami 4X4#	8 29280		Sliced AC Genoa (6X48 Premium	11,190.7	16.7	15.7 Lg Diameter
47809	BELLISSIMO Sliced Genoa Salami 2/4# units	10 29338		Sliced 4X48 Pepperoni	10,972.5	23.4	22.4 Lg Diameter
30021	BELLISSIMO Sliced Deli Pepperoni	17 29291		Gratifica AC Genoa	10,848.8	18.1	17.1 Lg Diameter
2631	PRIMA QUALITA AC GENOA 3 Pieces	16 29124		Sliced 6X48 Gratifica BC	10,530.0	21.2	20.2 Lg Diameter
53001	PICK OF THE PRAIRIES Sliced HARD SALAMI 4/4#	11 29141		AC-AD Genoa Salami	10,480.3	16.3	15.3 Lg Diameter
46001	AQUILA DOROGENOA SALAMI 2PC	16 29124		Sliced 6X48 Gratifica BC	10,474.1	24.7	23.7 Lg Diameter
53004	ULTIMO SUPREME Sliced HARD SALAMI 4/4#	20 29280		Sliced AC Genoa (6X48 Premium	10,258.7	20.6	19.6 Lg Diameter
2815	LIGURIA Deli Sliced Genoa Salami 4/5#	17 29291		Gratifica AC Genoa	10,056.5	17.8	16.8 Lg Diameter
2940	LIGURIA AC GENOA SALAMI 3 Pieces	20 29280		Sliced AC Genoa (6X48 Premium	9,550.2	24.8	23.8 Lg Diameter
47802	DELI SLICED GENOA SALAMI 4-5# Units	16 29291		Gratifica AC Genoa	9,040.7	17.2	16.2 Lg Diameter
44029	SCOTT PETERSEN GENOA SALAMI 3 PC						

# Detail – Large Diameter (2 of 2)



ProdNum	Description	Targetwt	Wip Code	Wip Desc	Sum of Netwt	Average of Days 1 Average of Days 1 Type	% Type
2814	LIGURIA DELI SLICED GENOA SALAMI 4/4#	16	28230	Sliced AC Genoa (6X48 Premium	8,994.5	17.2	0.6%
47801	ULTIMO SUPREMESLICED GENOA SALAMI 4-4# Units	16	28280	Sliced AC Genoa (6X48 Premium	8,792.5	19.8	0.6%
35033	LIGURIA ITALIAN Style Dried Salami 2/5#	10	28388	Sliced AC Genoa (6X48 Premium	8,762.5	16.6	0.6%
46002	LUIGI-SALAMI GENOA STICK2 PC	11	28141	Italian Style Dried Salami	8,759.5	15.8	0.6%
53010	FOX'S PIZZA DENSICED HARD SALAMI 2/5# GF	10	28336	AC-AD Genoa Salami	8,025.9	16.9	0.5%
34022	WALNUT CREEK FOODSLICED 4X48 Deli Pepperoni 4/4#	16	28338	4X48 Hard Salami	7,184.1	18.6	0.5%
34000	WALNUT CREEK FOODSLICED 4X48 Deli Pepperoni 4/5#	20	28338	Sliced 4X48 Pepperoni	7,138.8	19.4	0.4%
35046	PAPA MURPHY'S Italian Dried Salami	20	28388	Sliced 4X48 Pepperoni	6,829.7	26.0	0.4%
50001	HILLANDALE FARM SHARD SALAMI 3PC	16	28338	Italian Style Dried Salami	6,793.1	11.9	0.4%
44023	SHERENE GENOA SALAMI 6 PC	16	28278	Sliced 4X48 Pepperoni	6,784.4	25.6	0.4%
2476	GRATIFICA AC GENOA SALAMI 3PC	36	28281	Gratifica BC	6,714.0	24.1	0.4%
46011	LEONARDOS GENOA SALAMI 3PC	16	28291	Gratifica AC Genoa	6,453.5	17.0	0.4%
53028	TURBYS SLICED Hard Salami 4X5#	17	28141	Gratifica AC Genoa	6,274.4	16.6	0.4%
91807	SAYONA AC GENOA SALAMI 3PC	16	28278	AC-AD Genoa Salami	5,057.7	17.2	0.4%
53003	ROMA ITALIAN DRY SALAMI 2/5# Gas Flush Bags	20	28124	Gratifica BC	5,691.0	24.1	0.4%
50016	BERKSHARD SALAMI 3PC	17	28281	Sliced 6X48 Gratifica BC	5,438.5	31.3	0.3%
2878	SLICED DELI PEPPERONI 8 COUNT 4/4#	10	28388	Gratifica AC Genoa	5,023.9	16.6	0.3%
91834	LIGURIA DICED AC GENOA 10#	16	28338	Italian Style Dried Salami	4,450.8	16.7	0.3%
53025	Cottage Inn Sliced Hard Salami 2/5#	10	28281	Gratifica BC	4,191.5	22.4	0.3%
40001	BERKS GENOA SALAMI 3 PIECES	16	28124	Sliced 4X48 Pepperoni	3,939.1	22.0	0.2%
53018	LIGURIA Sliced Dried Salami 2/5#	10	28336	Gratifica AC Genoa	3,834.0	15.0	0.2%
38040	MR. HEROS LIGED DELI PEPPERONI 5CT 2/5#	10	28338	Sliced 6X48 Gratifica BC	3,609.7	23.6	0.2%
34017	ULTIMO SLI LG DELI 6X48 4/4#	17	28291	Sliced 6X48 Gratifica BC	3,636.0	22.5	0.2%
50002	ROMA-SALAMI HRD STICK2 PC	16	28341	Gratifica AC Genoa	3,494.2	17.5	0.2%
2642	LIGURIA SLICED GENOA SALAMI	16	28341	4X48 Hard Salami	3,475.4	23.8	0.2%
2879	LIGURIA SLICED DELI PEPPERONI 8 COUNT 4/5#	10	28280	Sliced 4X48 Pepperoni	3,248.5	24.8	0.2%
34020	NELLIES PROVISIONS SLICED DELI PEPPERONI 4/4# 5CT	20	28338	6X48 Pepperoni	3,049.6	28.9	0.2%
91865	DIMAR AC GENOA SALAMI 6PC	16	28336	Gratifica BC	2,374.3	24.7	0.1%
53002	ROMA SLICED HARD SALAMI 2/5# GF	36	28291	Sliced AC Genoa (6X48 Premium	1,047.1	16.8	0.1%
38080	ROMA-PEPPERONI DELI SLICED 5 CT 2.75 DIAM 10 LB	10	28124	Sliced 4X48 Pepperoni	761.3	22.4	0.1%
92053	GRATIFICA HARD SALAMI 3PC	16	28278	Sliced 4X48 Pepperoni	503.2	36.0	0.0%
				Gratifica AC Genoa	357.5	21.9	0.0%
				Sliced 6X48 Gratifica BC	190.0	15.0	0.0%
				Sliced 4X48 Pepperoni	160.5	20.0	0.0%
				Deil Pepperoni Large Pepp	105.6	34.0	0.0%
				Gratifica BC	34.6	38.0	0.0%
					1,586,338.8	24.0	100.0%

My notes from  
conference call  
to discuss pyromani  
discoloration issues

Liguria call 2-6-13 1 PM

Gery, Jim, Keith

cell 270-316-6310

Rancidity on sliced pepperoni

One spec lot + one category - generally

40

Regular slicing diameter product

2450  
138  
2588

Aspartame vs. dextrose

Sodium erythorbate vs. none

1.5% sugar

no ascorbate

BHA, BHT + C/A

Auger

OK Paprika

Garlic powder

160-180 days - fry / 6-10 days cooler.  
no light exposure -

Good

BHT - OK

BHA - low .0004

Bad

no BHT

no BHA



How long until problem after string? couple months ago

How packaged? bulk shield, FE

Common formulations -

Antipilant system - SHA, BHT, C/A

Who sources spice from? Griffith

Rework in all 3 no

\* 9 months code

Over process commonality?

\* 160° - surface treat for surface reconditioning -  
done quite often but problem not only associated  
circumstances 1/4 mix - 2 1/2 minutes

Blend procedure - 26-27° temp total blend time

CONFIDENTIAL (P) ✓ for salt uniformity @ grid  
to assure mix. SEAVEY000046

- ② Look @ wazany extract (naturex)
- ③ Look @ S. camosus culture addition
- ④ Have Griffith validate handling + min. procedures for antioxidant.